

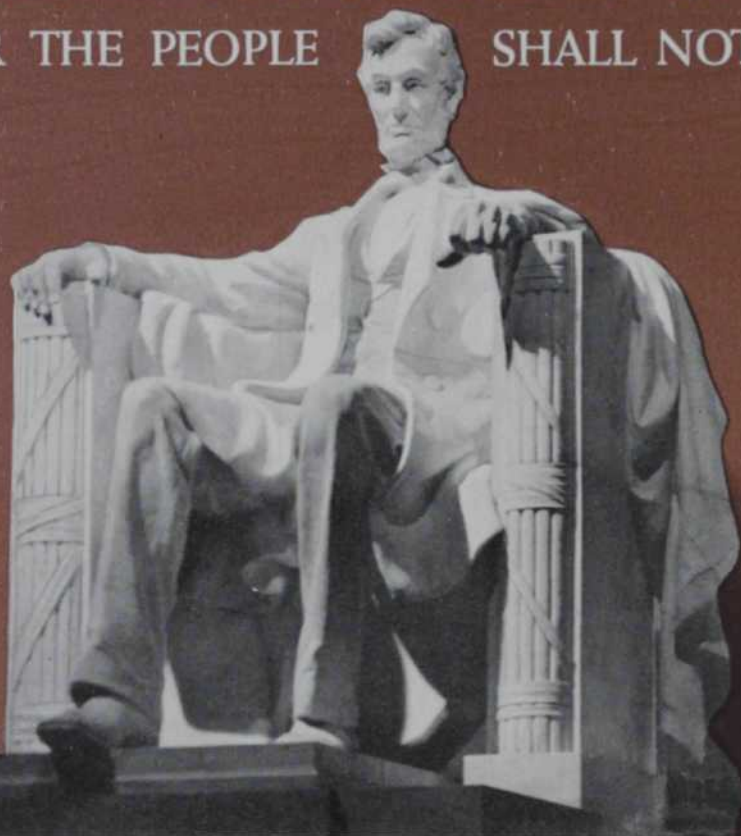
# NATION'S BUSINESS

DECEMBER • 1941





THAT GOVERNMENT OF THE PEOPLE • BY THE PEOPLE  
 \* \* \* \* FOR THE PEOPLE SHALL NOT PERISH \* \*



**"No matter what it takes, no matter what it costs, we will keep open the line of legitimate commerce in these defensive waters"**

—Franklin D. Roosevelt

**A** GAIN, America has spoken. She has declared that she will maintain the freedom of the seas at all costs, and will use every means within her power to preserve our democratic way of life.

To carry those measures through, an important link in the chain of our defense needs strengthening. It is a link vital to the building of ships, planes and armament, because it will determine the speed and quantity of their production. *It is adequate freight car equipment.*

**Transportation is the primary arm of defense, and the primary arm of transportation is the freight car**

The fundamental importance of freight cars is self-evident. We, as a nation, propose a two-ocean navy—a mighty merchant fleet. To build them means, first, freight cars in sufficient numbers to deliver the quantities of

materials needed for their construction and to keep them supplied after they are built.

Again, we propose an armament industry capable of serving as democracy's arsenal—and a modern mobile army. American railroads were primarily planned for civilian needs... needs for fuel and food and shelter that won't cease for the duration of the emergency. Thus, the railroads must assume a double burden. And, beyond that, they must also take over the cargoes of coastal ships transferred into oceanic service.

The full capacity of the car manufacturers will be taxed to meet the Government's estimated freight car requirements.

**A new freight car every  
 4½ minutes**

Right now Pullman-Standard Car Manufacturing Company is turning out one complete freight car every

4½ minutes of the working day... and that is not the limit of its capacity. As and when materials become available—so that it can make full use of multiple shift operation—the present high rate of production will be substantially increased.

With that as its goal, Pullman-Standard pledges the full efforts of its production, engineering and research staffs... the full measure of experience embraced by its 82 productive years... and the loyal, untiring determination of every worker in its many plants to do his part toward preserving the American way.

For, although Pullman-Standard, in addition to Railroad and Transit Equipment, is building Tanks, Trench Mortars, Gun Carriages, Shells and Airplane Wings, *it recognizes that nothing it can contribute to our defense program is more important right now, than the effective use of its total, freight-car-building capacity.*

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**PULLMAN-STANDARD CAR MANUFACTURING COMPANY**  
**CHICAGO • ILLINOIS**



## THE INSURANCE BROKER *is a Buyer*

The competent insurance broker has no pet policies for sale, nor is he working for any particular insurance company. His entire job is to serve the public in the efficient negotiation and purchase of every type of business insurance; to advise his clients on all insurance matters; to collect their claims.

Out of the scores of different policies available, the broker selects those that most closely meet your needs—and then modifies them still further, if necessary. By this method you get an individual insurance program that fits your business.

This is the basis of the many services the insurance broker offers. There are real advantages to you in these services—in having your insurance program planned and bought by a buyer who knows the insurance business in all its branches—and who always

represents you—and no one else. Moreover, the broker's compensation is not an extra fee from you, but a brokerage paid by the insurance company.

Johnson & Higgins serve as insurance buyers for substantial firms and corporations. Their organization has a thorough knowledge of insurance laws, customs, markets and contracts—based on over 95 years of experience.

If you would like to know more about insurance brokerage as applied to your particular business—have a talk with a Johnson & Higgins representative. You will find that insurance is a live and interesting subject; you will discover practical benefits.

\* \* \*

*The best brokerage service is yours to command—at no additional cost.*

## JOHNSON & HIGGINS

*Established 1845*

**INSURANCE BROKERS**

**63 WALL STREET • NEW YORK**

*Buyers of Insurance for Commerce and Industry*

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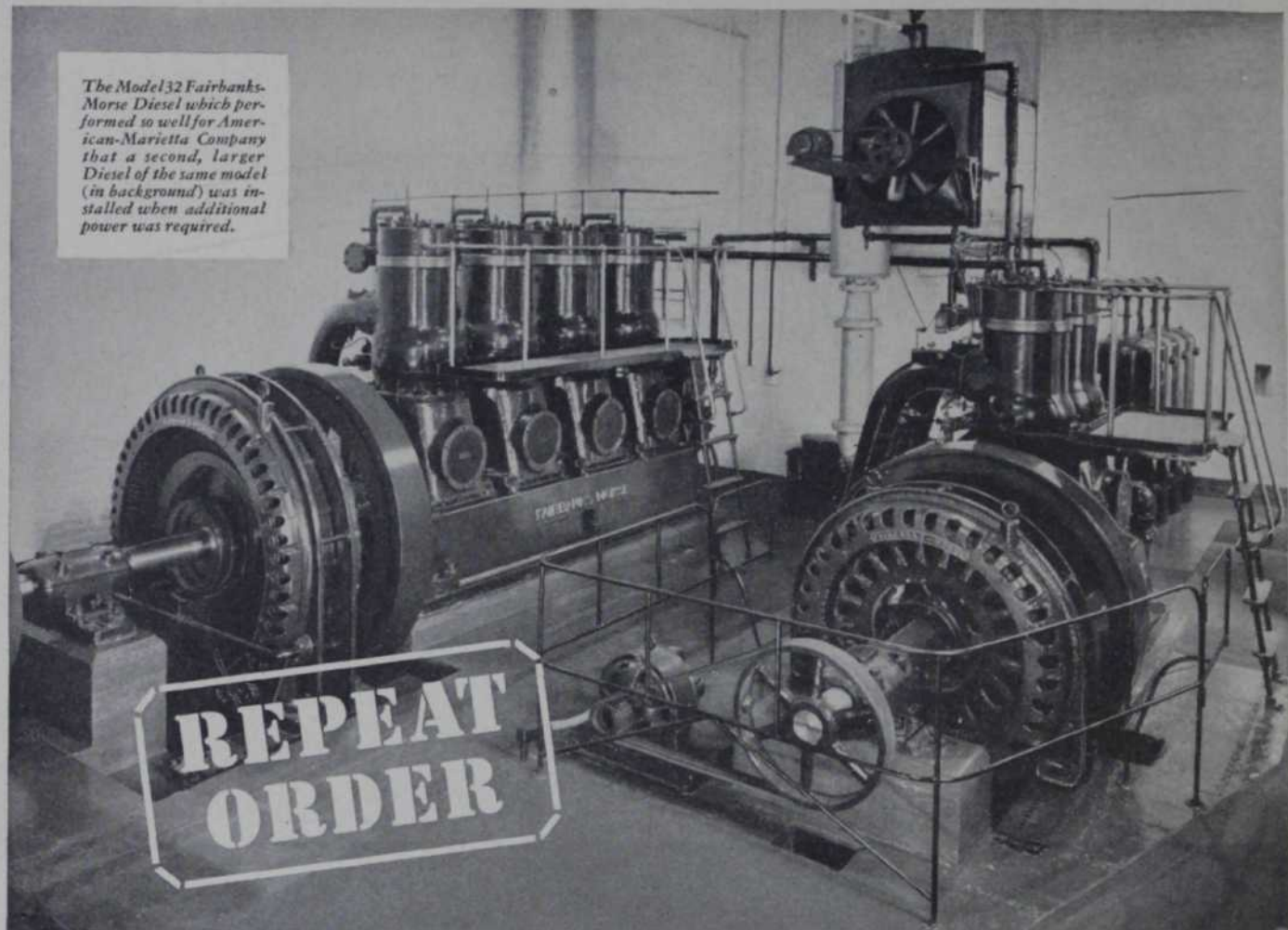
MONTREAL

VANCOUVER

WINNIPEG



*The Model 32 Fairbanks-Morse Diesel which performed so well for American-Marietta Company that a second, larger Diesel of the same model (in background) was installed when additional power was required.*



# **\$3700 Saved in 1939**

## **So They Bought a Second F-M Diesel**

● To provide power at less than public utility rates, the American-Marietta Company, manufacturers of industrial finishes in Kankakee, Illinois, put a Fairbanks-Morse Diesel with direct-connected F-M generator into operation on January 1, 1939. 151,624 kw-h. were generated in 1939 at a cost of only 1¼¢ per kw-h. To purchase this power would have cost \$3700 more!

Because of this economical operation, a *second* F-M Diesel generating unit was bought in 1940 when plant expansion increased power needs. Now the two F-M Diesels meet all power requirements of the plant . . . at a fuel, lubricating oil, and labor cost of only \$.0064 per kw-h. *Another* saving, not reflected in the above figures, is realized by using Diesel cool-

ing water to heat the buildings. Power cost is now relieved of unpredictable demand charges and peak penalties.

Similar cases of repeat purchases of F-M Diesels are also the rule in many other industries throughout the country. For the slow-speed, two-cycle F-M Diesels are designed and built to give low fuel and maintenance cost in continuous heavy-duty service. Operating records prove it!

Find out what F-M Diesel power could do for you. Write to the largest U. S. manufacturer of a complete line of Diesels—Fairbanks, Morse & Co., Dept. L56, 600 S. Michigan Ave., Chicago, Ill. Branches and service stations throughout the United States and Canada.

# **FAIRBANKS·MORSE DIESELS**

MOTORS  
PUMPS

ELECTRICAL MACHINERY  
FAIRBANKS SCALES

RAILROAD EQUIPMENT  
WATER SYSTEMS

WASHERS-IRONERS  
FARM EQUIPMENT

STOKERS  
AIR CONDITIONERS





## When a man needs protection

*Life is full of situations in which both one's person and pocketbook are subject to hard blows.*

• • •

Fortunately, today you can protect yourself against both types of risk with modern insurance: Personal accident insurance to cover injuries to yourself—liability insurance to cover possible damage suits resulting from injuries to others—fire insurance on your home and household property—and extended coverage that also protects you from damages caused by windstorms, falling airplanes and other hazards.

Perhaps such a program sounds both complicated and expensive. Actually it is neither. Your local agent or broker (incidentally the Aetna Fire Group sell only through such representatives) can give you expert advice on how to secure broad protection at low cost.

• • •

It is also worth remembering that if your insurance is with a capital stock company, you are never liable for assessment. Your policy is backed by a paid-in capital as well as a surplus.

**Don't Guess About Insurance  
— CONSULT YOUR LOCAL  
AGENT OR BROKER**

WARS	CONFLAGRATIONS	DEPRESSIONS
1846 Mexican War	1835—New York City	1819
1861 Civil War	1845—New York City	1837
1898 Spanish-American War	1851—San Francisco	1843
1917 World War	1866—Portland, Me.	1857
	1871—Chicago	1873
	1872—Boston	1873
	1877—St. John, N.B.	1893
	1889—Seattle; Spokane	1907
	1901—Jacksonville, Fla.	1921
	1904—Baltimore	1929
	1906—San Francisco	
	1908—Chelsea	
	1914—Salem	

*Since 1819*

through conflagrations, wars and financial depressions, no policyholder has ever suffered loss because of failure of the

**Aetna**  
to meet its obligations.



**THE AETNA FIRE GROUP**

HARTFORD, CONNECTICUT

New York, Chicago,

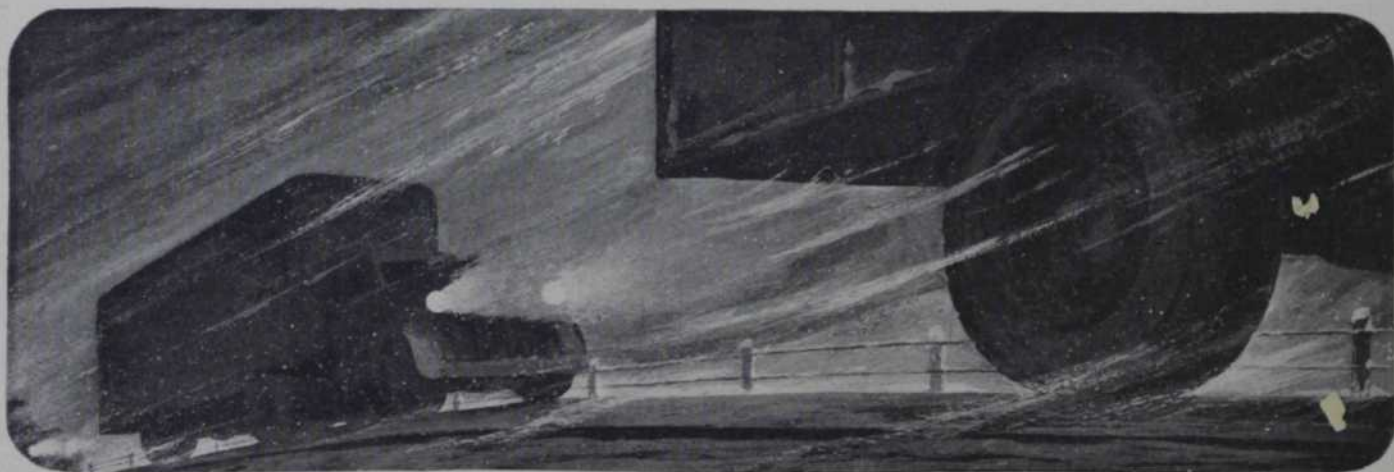
San Francisco, Charlotte, N. C., Toronto, Can.





# THE ROAR

*that must* **NOT CEASE**



**R**OARING through the night, rumbling through the day, a swift, almost endless stream of wheels carries over the hills and through the valleys of this land the lifeblood of democracy...

Supplies... *vital* supplies... of all sorts and kinds.

Supplies that must get through on time. And icy highways must not—*will not*—stop them!

For in all corners of the land, engineers are preparing for whatever the winter may bring... with the deadliest enemy of snow and ice—common *salt*.

Salt whose biting "auger action" cuts through the packed snow and sheets of ice... clearing the frozen arteries of transportation... surely... thoroughly.

But for salt, this is only one of many labors. For salt or salt processes by International are vital to the tanning, dyeing and glass industries; to meat packing, canning and stock feeding. And they are as important to as many other industries—which, at first glance, may not seem even remotely allied with so common a substance.

Would you like to test your knowledge of common salt? Just let us know where we can send you an interesting illustrated booklet, "Salt by International." International Salt Company, Inc., Scranton, Pa. Rock salt, evaporated salt, lixated brine, Sterling table salt—for industry, agriculture and the home.



# December ★ CONTENTS ★ 1941

## Regular Features:

<i>Through the Editor's Specs</i>	7
<i>The Defendant in the Wrong Box.....</i>	15
MERLE THORPE	
<i>Washington and Your Business.....</i>	56
HERBERT COREY	
<i>No Business Can Escape Change.....</i>	62
<i>Marketers Talk Shop.....</i>	70
FRED DE ARMOND	
<i>Memo...for Busy Readers...</i>	72
<i>The Map of the Nation's Business.....</i>	76
FRANK GREENE	

## Industry is Going Great Guns

PAUL McCREA

PAGE  
17

1. The cow pasture phase 19
2. Swords from plowshares 21
3. 18 workers per soldier 30
4. Not for pay alone 34

## Britain Liquidates Its Tradesmen

A. WYN WILLIAMS

37

Overseas business men have learned to look for motives behind measures advanced under the guise of military necessity. Bureaucracy, in the clothing of patriotism, is invading fields once regarded as the province of free enterprise, as the New York representative of the Manchester Guardian demonstrates

## The Tangled Web of Priorities

LAWRENCE SULLIVAN

40

When the job of saying who shall have which for what gets out of hand, Government's solution is to ask for more authority. A man who has written of the Washington scene for 15 years looks ahead to the coming years, already forecast as "the toughest since Valley Forge"

## As Business Sees the Labor Issue

ALBERT W. HAWKES

44

The President of the United States Chamber of Commerce states the position of organized business, as a necessary background for a better understanding of forthcoming events in the field of employment relations

## Harmony in U. S. Handouts

CARLISLE BARGERON

48

An introduction to Archibald MacLeish, poet-librarian who has undertaken to make Government's thousands of press agents sing in harmony

## Housewives Join the Hunt for Substitutes

JULIETTA K. ARTHUR

51

We won't have to sleep on pallets, cook on open fires or cool dishes on the window sill. Just what the defense program does mean to the American standard of living is summed up here by a typical woman shopper who went out to see for herself

## If Statistics Can Win Wars, We're Safe

64

## Autos Float—190 at a Clip

83

## NATION'S BUSINESS • CHAMBER OF COMMERCE OF THE U. S.

VOLUME 29

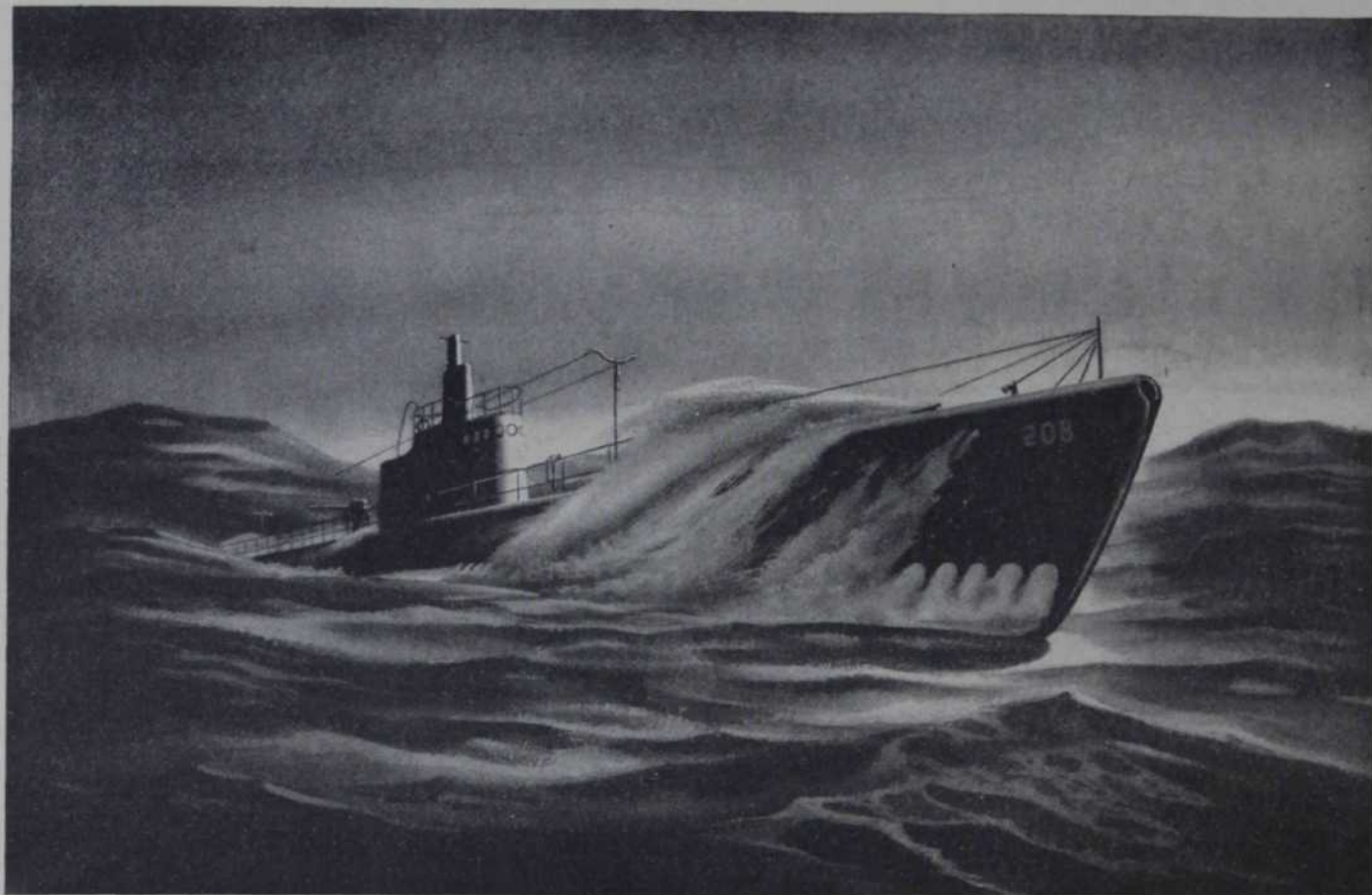
Merle Thorpe, Editor & Publisher

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## *Here's What Keeps the Iron in "Iron Men"*

"Pig boats," Navy men used to call them, but they've got to think up another name now, for they're air conditioned by York. These days submarine crews of the United States Navy are assured of good air . . . air that

keeps red blood red, senses alert, and hands steady. And today, machinist's mates of the submarine service, from as far away as Honolulu, are going to school at the York plant to study the air conditioning and refrigeration equipment that is going into the subs.

In a specially set up schoolroom, the first of its kind ever undertaken, these Navy machinists will operate typical submarine installations, study the equipment piece by piece, as well as the theory of air conditioning and refrigeration. Rigid examinations are assurance that on their return to duty these men are prepared to operate and care for their machinery under the most severe conditions of naval service.

York is glad to be able to perform this service for the Navy. York Ice Machinery Corporation, York, Pennsylvania.



Fred B. Kinley, York marine specialist, instructs U. S. Navy machinist's mates in submarine air conditioning at the York-Navy Training School.

# **YORK** REFRIGERATION AND AIR CONDITIONING

*"Headquarters for Mechanical Cooling Since 1885"*

A FEW OF THE MANY NATIONALLY-KNOWN USERS OF YORK EQUIPMENT—American Air Lines • Armour • Bethlehem Shipbuilding • Borden Canada Dry • Coca-Cola • Curtiss-Wright • du Pont • Eastman Kodak • Esperson Bldgs. • First National Stores • Firestone • Ford General Baking • General Foods • General Motors • Goodrich • Massachusetts Mutual Life • Montgomery Ward • Pabst Brewing Procter & Gamble • Sears Roebuck • Shell Oil • Swift • Texas Company • United Fruit • U. S. Army • U. S. Navy • Woolworth





In thousands of homes throughout the length and breadth of our land, mothers and fathers, sisters, brothers and sweethearts will be happier this Christmas season because hats of khaki and blue hang in the hall.

From camps, naval bases, flying fields, far and near, the trains of American railroads will carry tens of thousands of the boys home for Christmas time — safely, swiftly and comfortably.

The Norfolk and Western Railway is proud to have the privilege of moving its share of the nation's armed forces this holiday season. It is prepared and equipped to do the job — smoothly and efficiently.

The Norfolk and Western and its Family of employees wish you a very Happy Christmas.

**Norfolk**  
and **Western**  
Railway

## THROUGH THE Editor's Specs

### Silver lining

"Peace on the earth, good will to men  
From Heaven's all glorious King—"

IN the next few weeks, throughout Christendom, that song will rise from the innocent throats of children like those H. Armstrong Roberts has pictured on our cover. In this land, their songs will rise above the grumble of machines grinding tirelessly to fashion instruments chosen because of their calculated efficiency in mangling human beings.

In other lands, the songs will rise above the horror of those instruments in brutal action:

"Peace on earth and mercy mild—  
God and sinners reconciled."

It is a tribute to the innate decency of human kind that only a smattering of iconoclasts will find irony in those songs. Amid the tumbled rubble of battlefields soldiers will hear them, at least in memory; pickets at strike-bound plants will listen, and puzzled diplomats, and worried business men. What war is so brutal, what strike so bloody, what national problem so terrifying, or business worry so pressing, that it leaves no time to pause for the Christmas voices of children. Singing.

Perhaps, in a world of little hope, that thought is one to cling to. In spite of hate, and greed, and selfishness, it seems to say that, inside of all of us, is a unity that could avoid misunderstanding and slaughter if only we knew how to use it; that sometime we may all be wise enough to forget national intolerance, unholy ambition, avarice, and join the children singing, wholeheartedly: "God rest you merry gentlemen, may nothing you dismay."

### The pattern of bureaucracy

WHENEVER we are tempted to forget how delicately and how intricately balanced are the wheels of commerce and trade, we may turn with profit to the closing wholesale prices of the day for commodities like lard, cocoa, lead, zinc. Lard, per pound, in a whole year has changed by so little as \$.0005 per pound. Cocoa moves from \$.0494 to \$.0828 per pound in a tumultuous year.

A fascinating interplay of economic forces balances one factor against another. Sellers' costs, buyers' needs, the availability of substitutes, taxes, wages, government financing, all exert an influence so finely measured that on a given day A will buy or refuse to buy B's product, depending on A's conviction that he can afford one twentieth of a cent more per pound.

It passes understanding how men may feel sure of avoiding economic and social catastrophe when, at the mere scratch of a pen, they order A to cease buying, B to stop making and C to trade no longer with either.

A. Wyn Williams in the leading article of this issue, "Britain Liquidates Its Tradesmen," describes a long and rough-shod interference by British bureaucrats with the process of English economic life. So cavalierly have they acted that bureaucratic interference with domestic trade and commerce constitutes practically an internal invasion of Nazi economic doctrine. So far has it gone that post-war retreat to a free enterprise system even after military victory may invite disaster. The thoughtful reader in America may well see a pattern of British experience which at all costs we must avoid.

### Again the evil speed-up

A SALESMAN for a firm of vitamin makers was trying to sell a manufacturer on buying the product for his workers, says *Tide*. The answer was one for which his repertory of sales arguments had no counter.

"If your vitamins do my men any good," said the manufacturer, "their three unions will accuse me of plotting to speed up labor."

Uneasy is the head of the employer. If he doesn't have a program of social uplift for his workers he is a reactionary exploiter. If he does try a bit of uplifting he is a subtle Machiavellian trying to pay his men in the base coin of paternalism.

### Bureaus never die

OFFICIALS of the C.C.C. and N.Y.A. appear to be seriously alarmed by the



## Being a good neighbor is a full-time job



When you have a good neighbor, you have a good friend . . . day in, day out — year in, year out.

Your Standard agent or broker is just such a good neighbor. He is always available . . . to help you choose the insurance policy or bond best suited to your specific needs, to help you get maximum coverage at minimum premium cost. And, when losses occur, you'll find him right there to give you needed counsel and help.

There are thousands of these Standard "good neighbors" throughout America. Whether it is protection against loss due to automobile accident; burglary; embezzlement; injury to you, your employees or the public; or other similar hazards, the Standard representative serves you throughout the year — a constant good neighbor in action!

**STANDARD ACCIDENT INSURANCE COMPANY**

*Standard Service Satisfies . . . Since 1884*

return of normal employment caused by the armament program. It seems there just aren't enough unemployed young men to keep their "emergency" agencies supplied. An extensive recruiting drive is on. In competition with the armed services and defense industries these bureaucrats hope to discover more youths who can be uplifted. Mrs. Roosevelt hopes the services of the N.Y.A. and C.C.C. "will not be impaired."

The Federal Surplus Commodities Corporation likewise faces a threat from returning prosperity. The Food Stamp Plan was devised to raise depressed farm prices and lift up underprivileged consumers. Now all prices are rising so rapidly that no Food Stamp Plan is needed any longer; in fact the Washington economists are scratching their heads for ways to keep them from rising any higher. At the same time new industrial defense pay rolls are, or should be, reducing the underprivileged consumers almost to the vanishing point.

Non-defense squandering continues, bureaus fatten, social reform knows no holiday, however great the emergency may be. Here are three agencies of the Government set up specifically to mitigate certain abnormal economic conditions that prevailed back in the depth of the depression. Now that those conditions no longer exist, the sensible course would be to liquidate them and translate the energy of the bureaucrats to defense production. To what end are they continued?

### Weaving tangled webs

A READER in Coudersport, Pa., writes us that two dairymen in his county have each been fined \$25 and costs for selling milk too cheap. Our correspondent is disturbed about it. He says:

I wish somebody would put me right about this. I see by the papers that government officials fear runaway price inflation, that Congress is working on a bill to make it unlawful to sell goods at prices above a certain ceiling, etc. Mrs. Roosevelt demands curbs to prevent prices from "running riot." Somewhere between Washington and Coudersport the wires seem to have been crossed. If it's already a crime to sell too low, and soon will be a crime to sell too high, maybe I'm violating the law myself. I'd just like to know what an ordinary small business man can expect. Can you tell me where the line between selling and crime will be drawn?

It's too much for us. If any reader who has a clue to the riddle will send it on to us, we'll pass it along to Coudersport.

### The fight we fight

THE financial commentator of the London magazine, *New Statesman and Nation*, came out flatly in a recent issue with the assertion that "we



should not tolerate any longer the machinery of capitalist government which is now enshrined at Westminster... it is psychologically unadaptable to totalitarian war."

Continuing his philippic, this writer declared that capital and labor unions were stripping the country, sharing the spoils of high prices and high wages. When a factory or business is required by the State, its owner must be made to surrender it and become a hired manager. A worker must accept the wages granted him by his Government and, if required, leave his home and work wherever he may be assigned.

This outburst and others of similar tenor from America should make the former corporal in the Wilhelmstrasse chuckle. If this philosophy prevails in once-free nations, the Hitler ideology will have won, whatever the god of battles may decree.

### Incentive for the gander

TESTIFYING before the House Banking Committee, Isador Lubin, Commissioner of Labor Statistics, made the curious statement that a ceiling on hourly wage rates might result in a "psychological state of mind detrimental to the rate of production."

It is curious because high federal officials, including Treasury Secretary Morgenthau, have been talking very positively about "taking the profits out of war," limiting profits to six per cent, etc. If limitations on wages produce the psychological effect adverse to emergency production that Commissioner Lubin foresees, what does he think about the psychological effect upon the rest of the civilian army? Are white collars and overalls not of the same blood and kin?

### Misguided union leadership

FROM Springfield, Mass., comes the report of a cement finisher who was offered employment at the Chicopee housing project at \$13 a day, with the condition that he pay a union \$4 a day for the privilege of working. He would not become a regular member of the union but was merely to buy a special work permit.

In this way some of the building trades unions leaders exploit the emergency. Members of certain religious sects holding scruples against joining any organization have been given these special dispensations. In consideration of paying a specified daily tribute the worker is graciously permitted the privilege of earning a living. It is a racket even more conscienceless than those under which customers have long been bled.

Certain leaders of unions, having been given unusual and dangerous



## It must not stop now!

Like a long-distance plane winging its way over the high seas, order-laden industrial plants *must not stop* through power-plant failure. Greater than ever is today's need for power-plant dependability. Greater, therefore, is the need for careful check-up—for the most competent and thorough insurance-inspection available.

For a service of this kind you should have one which is amply fortified with an engineering staff of long experience; with a nation-wide force of capable field men to apply its methods and its skill to the safeguarding of your power-plant.

Hartford Steam Boiler has brought these facilities to American industry for 75 years. More than 400 well-trained inspectors and supervising

engineers carry out its nation-wide operations. They have the undivided support of a financially strong organization engaged solely in power-plant accident prevention and insurance. It is that support which makes their help to you so valuable.

Hartford Steam Boiler service has the man-power to get to your equipment frequently; to come to your aid quickly should emergency threaten or disaster occur.

If your industrial production *must not stop*, ask your agent or broker to tell you more of the story why Hartford Steam Boiler protection against power-plant failure is the most economical in the end.



## THE HARTFORD STEAM BOILER INSPECTION AND INSURANCE COMPANY • Hartford, Connecticut

Power-plant Insurance by Power Engineers

Covers: Boilers • Steam, Gas and Diesel Engines • Turbines • Pressure Vessels • Electrical Equipment  
Hartford Steam Boiler writes more power-plant insurance than any FIVE other companies combined. Shop-inspects over 90% of the nation's industrial-power boilers during their construction.



# Backing Him Up!



"In all the world no job is being better done today than by the American Railroads"

Hon. Clarence F. Lea of California, Chairman, Committee on Interstate and Foreign Commerce, before the House of Representatives, Sept. 25, 1941

1939 and WAR—and suddenly everybody looked anxiously to the railroads as the life lines of defense. Could they do their part of the job ahead?

They did it in 1939.

They did it again in 1940.

And now the record for 1941 is in—and the railroads have handled the biggest transportation job in history.

The railroads handled more traffic than in the busiest year of the first World War.

—handled more traffic than in

the peak year 1929.

—handled two-thirds of all the nation's traffic—all the freight they were asked to haul.

—hailed more tons more miles than any carrier in the world has ever transported in one year before.

The railroads did the job without car shortages—without congestion—for industry—for agriculture—for defense.

That record gives its own emphatic answer to fearful talk of railroad bottlenecks.

There weren't any. And, with the continued cooperation of the government and shippers, there won't be any—provided only that the railroads are permitted to get the materials they must have to keep tracks, locomotives and cars in repair, and to buy new equipment to meet increased defense production.

**ASSOCIATION OF  
AMERICAN RAILROADS**  
WASHINGTON, D. C.



powers, have become intoxicated. They consider that they have a higher call than the mere function of collective bargaining. They deal in the purveying of jobs—a far more lucrative field for them.

### Paper, new recruit

THIS is not only a mechanized war. It is also a paper war to a degree never seen in any other combat. Paper is consumed for defense stamp albums, for soldiers' handbooks, for war posters, for rifle targets, for blue prints, for mimeographed releases from a hundred federal departments. Last, but not least, for toilet paper, of which the army is stocking some 50 rolls per man.

The National Paper Trade Association estimates that for every \$5 spent on preparedness one pound of paper will be required. The trite term "red tape" in the army spells mostly paper work. Thousands of men at arms do their campaigning with typewriters instead of machine guns. Officers in the War Department write letters bristling with military phraseology to other officers at adjoining desks, and each letter must have 16 carbons. So civilians must economize by writing on both sides of our letter paper and by saving the wrappers from parcels. Paper will win the war, maybe.

### Going and coming

OUR Cynical Visitor sprang on us the other day an enigma in international policy. The policy is supposed to make sense, he says, but you have to have the faith that moves mountains to see it. Here's the puzzle:

Our Government is sending a billion dollars' worth of food to Britain. Because of this lend-lease commerce, Americans are paying much higher prices for their own food. The British Government sells our goods to its people and no realist seriously expects that this country will ever be paid for them. For that purpose our Government must tax the same people who have been paying these lend-lease prices at home. So, the good old American taxpayer pays twice.

### Tough job sidestepped

THE Filene Foundation's Institute for Propaganda Analysis has suspended operations for the duration of the war. According to an announcement by its president, "It is not practical to attempt dispassionate analysis of the steps being taken to impress the country with the seriousness of the crisis."

It would seem that now, if ever, an Institute for Propaganda Analysis would have its work to do.

### Bureaucracy as usual

ALL out for defense, restrict non-essential activities such as the making of refrigerators and automobiles—that is the official word from Washington to its subjects. But among the "essential" activities that must go on, we note, are 130 current "research projects" listed in a bulletin of the Bureau of Agricultural Economics. Typical of these projects being conducted by the Bureau, with the cooperation of various other government agencies, is this one:

A cultural and psychological analysis of selected American farming communities to study the cultural and social psychological factors in land use and rural life, with special reference to those factors which facilitate or impede changes and which contribute to the stability or instability of the individual and community life.

And here's another one bravely seeking new social worlds to conquer:

The study of the degree of want and interest satisfaction of the rural people, to develop a scale to determine needs, wants and interests and the extent to which they are satisfied.

Washington is bending every effort to arouse the people to a real sense of danger. It might add to its mailing lists several thousand bureaucrats who need conversion on "all out for defense."

### A rose by any name . . .

"HE has sent hither swarms of officeholders to harass our citizens and eat out their substance," said the colonists in justification of war with Britain in 1776. We select at random four letters from a sheaf of letters sent by small business men to the Senate Committee studying their problems:

Massachusetts—In my small office of three employees, the entire time of one is occupied on government returns and reports.

Virginia—Twenty-five per cent of my time and that of my wife, who works with me in this business, is taken up in the making of government reports.

Georgia—It takes the highest priced man I have in my business two-thirds of his time making and sending off government reports.

Illinois—We have here 30 employees and can afford only one office girl. We have 110 reports to make to the various federal departments, most of which are tiresome repetition.

### "... of the same opinion still"

THE Truman Congressional Committee for investigation of defense contracts spent more than four months in an effort to uncover some sign of profiteering on the part of business men who are selling goods and services to the Government. A large part of the time was devoted

## WHAT BEN FRANKLIN OVERLOOKED WHEN HE MADE HIS WILL

IN HIS will, Ben Franklin left \$5,000 to the City of Philadelphia for loans to workmen. Since then the fund has grown to more than \$144,000. But, because the terms laid down by Franklin were so strict, no one borrowed from the fund for 52 years.

To get a loan the workman had to be married, under 35, put up as security a first mortgage upon real estate in Philadelphia, and produce two "reputable" citizens to testify to his moral character.

It is a great credit to Franklin that he clearly recognized, so many years ago, that workers should have access to a source of cash credit. But Franklin could not foresee the many social changes that were to take place during the century and a half after his death. He could hardly anticipate that in the industrial society of today workers would have to be able to borrow on far simpler terms.

### Where workers can borrow

To make loans on terms within the reach of working men and women is the job of the modern family finance company like Household Finance. Here workers can borrow from \$20 to \$300 for emergencies largely on character and earning ability. No endorser is needed. No wage assignment is taken. The loan is made in a simple, private transaction. Borrowers repay in small monthly installments. Last year Household made over 800,000 such loans to workers in all branches of industry.

The table below shows some typical loan plans. The borrower may choose the schedule which best fits his own situation. Payments include all charges. Charges are made at the rate of 2½% per month (less in many territories on larger loans). Household's charges are below the maximum rates authorized by the Small Loan Laws of most states.

We will gladly send you more information about Household Finance service without obligation. Please use the coupon.

WHAT BORROWER GETS					
	WHAT BORROWER REPAYS MONTHLY				
	2 payments	6 payments	12 payments	15 payments	18 payments
\$ 20	\$ 10.38	\$ 3.63	\$ 1.95		
50	25.94	9.08	4.87		
100	51.88	18.15	9.75	\$ 8.08	\$ 6.97
150	77.82	27.23	14.62	12.11	10.45
200	103.77	36.31	19.50	16.15	13.93
250	129.71	45.39	24.37	20.19	17.42
300	155.65	54.46	29.25	24.23	20.90

Above payments include charges of 2½% per month and based on prompt payment are in effect in seven states. Due to local conditions, rates elsewhere vary slightly.

## HOUSEHOLD FINANCE Corporation

Headquarters: 919 N. Michigan Ave., Chicago  
One of America's leading family finance organizations, with 300 branches in 198 cities

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Please tell me more about your loan service for wage earners—without obligation.

Name .....

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*What are  
dive-bombers  
made of?*



CURTISS SB2C-1  
DIVE-BOMBER

U. S. Navy's answer to the dread Stuka is this Curtiss "Helldiver" which will out-perform any foreign plane of its type. Its armament and ability are naval secrets — but two of its principal ingredients are speed in the air and *speed in manufacture*.

C. C. Shellberg, in charge of all purchases at the Wright plant in Paterson, N. J. (where Wright "Whirlwind" and "Cyclone" engines are pouring off the lines for 'planes and tanks) says, "Every tool that can speed up defense is vital to us. Such a tool is the Ediphone. Ediphone Voice Writing eliminates interruptions, minimizes detail work, steps up executive capacity and

increases general efficiency throughout the office."

Your business will benefit when you "talk your work away." Dictate notes, correspondence, memoranda, etc., to an Ediphone and you'll add at least an *extra* hour of accomplishment to every working day. To prove it, without obligation, just phone Ediphone (your city) or write Dept. N12, Thomas A. Edison, Inc., West Orange, N. J., or Thomas A. Edison of Canada, Ltd., 610 Bay Street, Toronto.



EDISON  
VOICEWRITER  
Ediphone

to investigation of cantonment building. At the close of the hearings, out came this gem:

The committee does not contend that any of the officials were dishonest, although under the speed, confusion, and extensive scope of the program, precautions to safeguard against dishonesty on the part of others did not and necessarily could not receive the attention they would warrant under an efficiently organized system of internal check. It is therefore exceedingly difficult for the War Department to ascertain instances, if any, of dishonesty. The War Department should most carefully check into this phase of the program.

Mr. E. P. Palmer, who calls himself one of the two hundred odd contractors who had the temerity to accept a contract, interprets the above paragraph as follows:

We have spent four months investigating the defense program and nearly all of that effort has been spent on construction. We have found no evidence of wrong-doing on the part of those engaged in the program. But we have *suspicious*—and can hardly believe that there has been no wrong-doing. Therefore we suggest that the Army have a go at this question and see if it can't uncover something.

### Selective press relations

AN officer in the War Department's press section had compiled a representative list of newspaper correspondents who were to be invited on a conducted tour of defense establishments. Harold Jacobs, in the Office of Government Reports, was going over the list. Jacobs ran his pencil through several names, explaining that the papers they worked for were opposed to the administration.

Look here (said the War Department officer), this office has always operated on the principle that no favorites are played; news is news and we don't give it out on the basis of friendliness or hostility to the Administration. That has been the policy and so long as I am here it will continue to be the policy, and you can make an issue of it if you like.

The incident ended with the O.G.R. man backing down, as Delbert Clark relates it in his new book, "Washington Date Line."

### How to pronounce it

THOUGH we have known his name in print ever since Westbrook Pegler began discussing him, we have not been sure of the pronunciation of the last name of Willie Bioff, the West Coast unioner who claimed to be just a "million dollar errand boy" rather than an extortioner using threats of strikes and labor disorders in the movie industry.

According to the testimony which the jury believed, the name undoubtedly rhymes with "Buy-off." To the federal judge and to the public which is sickening of men of Bioff's stripe



and of the power they exercise, the name will probably be pronounced "Be-off."

### The ramparts we watch

POLICE in an Illinois city recently received a telephone tip that two suspicious characters had been seen surreptitiously snapping pictures in strategic locations. A squad car was put in instant motion and the two suspected spies quickly rounded up. They turned out to be the manager of the local chamber of commerce escorting a visiting clergyman on a sightseeing tour.

A southern pine manufacturer from Georgia was walking down a corridor in the War Department building in Washington the other day, accompanied by a representative of the Southern Pine Emergency Defense Committee. The manufacturer was feeling jubilant because he had just obtained, after a long hard quest, a final priority order for some nails needed in completing a defense job. But before he had passed out through those portals a guard stopped him and asked to see the contents of his briefcase.

"What's this?" the guard asked, pulling out two pictures.

"Air photos of my plant," the manufacturer answered.

"Where is your plant?"

"In Georgia."

"I'm sorry," the guard decreed, "but I'll have to keep these pictures."

"O.K.," the Georgian replied. "Keep them. Keep the whole briefcase. I've got everything I wanted here anyway. I'm going home and get to work."

Yes, the sentries on the ramparts are vigilant. But Harry Bridges and his kind are still comfortably ensconced in the republic, although Canada recently deported to this country an undesirable labor agitator who had crossed the border.

### The six per cent racket

THE BUREAU of Internal Revenue has uncovered a new taxpayers' racket. Not evasion of taxes—no, strange as it seems, this is overpayment.

According to law, when the Bureau makes a refund on overpayment of taxes it adds six per cent interest for the time such funds have been retained. Now it develops that a good many citizens find this six per cent so attractive that they err deliberately in computing their annual income taxes and thereby earn on the excess payments three or four times what any savings bank would pay.



## There are no non-essential tasks in essential industries!



Notices not sent out promptly, requisitions that haven't arrived, memos that get there tomorrow instead of today . . . and plants slow down, machines stand idle, production gets a kick in the pants! . . . Efficiency in shop and office depends more than ever on mailing and mail, makes the Postage Meter more of a necessity than ever before!

The Pitney-Bowes Meter *prints* postage as needed for any kind of mail or parcel post . . . prints postmark and slogan as well . . . seals envelopes at the same time . . . accounts automatically for postage . . . gives postage protection always . . . saves the handling and detail of paper stamps . . . makes mailing (and mail!) move faster, take less effort.

Metered Mail skips two postoffice operations, can get away faster, save time in transit.

Models for any business, large or small. Ask our nearest office for a demonstration—or write Stamford direct!

### Direct Defense Production by Pitney-Bowes

Trigger for machine gun . . . by Pitney-Bowes, largest maker of postage meters in the world. One of a growing list of precision products for National Defense which will soon exceed our meter production.



## Pitney-Bowes POSTAGE METER CO.



Branches in principal cities. See telephone directory. In Canada: Canadian Postage Meters & Machines Co., Ltd.

1336 Pacific St., Stamford, Conn.



# Beets! Beets! Beets!

A STORY OF NINE CAMPAIGNS



**A** CAMPAIGN is what sugar men aptly call the busy fall weeks when many mills run continuously, night and day, converting mountains of beets into sugar. During every campaign one big West Coast mill used to have several costly shutdowns due to belt trouble on its main pump drive. The costliest "double" belts stretched and stretched beyond take-up limits, making frequent resplicing necessary, and lasted only two seasons. So back in 1932 an S.O.S. was sent for the G.T.M. — Goodyear Technical Man. After careful analysis, he recommended a Goodyear COMPASS "80" truly endless cord belt. During its first campaign the COMPASS stretched only one and a half inches, easily adjusted on the sliding take-up without

stopping operations. This fall it is finishing its ninth campaign without another adjustment, without a single repair. It has given more than 25,000 hours' trouble-free service; more than four times longer wear than costlier belts; increased production. Countless records like this show why you save time and money, and conserve rubber for defense, by consulting the G.T.M. Write Goodyear, Akron, Ohio or Los Angeles, California — or phone the nearest Goodyear Mechanical Rubber Goods Distributor.

Compass — T.M. The Goodyear Tire & Rubber Company





## The Defendant in the Wrong Box

**O**UT OF the welter of events, which is trying the souls of thoughtful Americans today, comes one clear issue:

The United States is facing a change in its way of life. On every hand its past reliance upon the individual is threatened. The tidal wave engulfing the world is liquidating the Man and glorifying the State. Many names are given to it, but, under Socialism, collectivism, Fascism, Naziism, the New Order, it is the same thing, namely, political control of the activities and of the savings of the individual.

It may be that the oncoming liquidation of private management and endeavor, of the right to employ one's labor and use the products of such labor as one sees fit, cannot be kept from our shores. There are those who think not, who believe it inevitable. In any event it is the duty of those who are a part of the free enterprise system to make it so clear that the issue may be decided intelligently.

Few there are, if any, who do not have a pride in America. Why, they say, it has brought us more material comforts and conveniences than under any other state of organized society. More for less hours of labor, than any other country, any time, anywhere in the world's history. Well, then, we are proud of an *industrial* America. Ergo, proud of a country that has recognized and encouraged the peculiar abilities of management. Specifically, what peculiar ability? The peculiar ability to bring into productive effort workers and those who, through their savings, could supply tools and plant. A further ability to distribute the benefits of that effort to masses of the people—their customers.

The story is a twice-told tale, the story of the results of this system of free enterprise. During the past ten years we have heard so much of the failure of "capitalism," of the need "to make America over" that we have lost perspective. Perhaps, a visitor from abroad might focus our attention once more on the fruits of the American way.

Dr. Frederico Pinedo, a distinguished Argentine statesman, recently made as complete a study on the ground of America as was ever made by a foreigner. East, West, North and South he travelled. Hear him:

While it is true that Nature has been very kind to the United States in immense natural resources, the drive, the audacity and tenacity of the Americans had made excellent use of everything that Nature gave them. . . .

Although the United States has its multi-millionaires and at the same time undoubtedly has many people who do not have all the necessities of life, there is no place in the world where material wealth is so adequately sub-divided. By this I mean to say that in the United States there are millions of people who have so many material comforts. In no other part of the world do workmen, employees and small farmers have automobiles, telephones, radios, electric refrigerators, electric washing machines and thousands of other modern conveniences. . . .

Each day as much agricultural machinery is sold to the American farmers as the Argentine farmers buy in one whole year. . . .

All of the above is mentioned in order to show that the people of the United States merit the political and social structure which they have created in order to reach their degree of civilization. When other forms of government may be able to exhibit such results from a material and cultural point of view and down through the different classes of the people; when other forms of government may be able to create among their people that sentiment of dignity; when they may be able to prove that they can maintain order in some form that has not involved complete submission of the masses; when they have been able to create unlimited cultural advantages for every one through schools and universities in all parts of the country; when they have been able to give their people a sense of security as regards their rights and liberties instead of utilizing terror and robbery; when and then only should we even think of orienting ourselves on the basis of what is happening in some country other than the United States.

What Dr. Pinedo is saying to us is: You Americans, of all peoples, should challenge any proposal to build up the power of the State at the expense of the individual.

The weakness of our cause is that we have been jockeyed into the position of defendant. What a sorry spectacle! The burden of proof should lie upon those who are changing piecemeal our institutions. They should be required to produce evidence that their program, which always calls for more political authority over the individual, has sometime, somewhere, even remotely measured up to the way of life they would supplant.

Who questions the jury's verdict if such evidence were required?

*Mere Thorne*





## *That's Why* **MOTOR TRANSPORT IS GEARED FOR THE BIG DEFENSE JOB!**

MORE defense material is being moved every month . . and each succeeding month will bring still more tonnage to be moved. It's a tremendous task!

*Motor Transport stands ready to see the job through!*

● Motor carriers' equipment can work virtually 24 hours a day, 365 days a year . . no loss of time, no side-tracking, no waiting for schedules or motive power. Many Truck-Trailers run 100,000 miles a year! The average for all in interstate "for hire" carriers' service is 49,500 miles (1939 I. C. C. report) . . **135 MILES A DAY THE YEAR 'ROUND!**

In contrast, the average annual mileage of all freight cars is less than 14,000 (1939 official reports, latest available) . . a daily average of less than 40 miles, or only two-sevenths the mileage of the average Trailer in interstate service. Since they spend so much more time **USEFULLY**, motor carriers can haul **MORE TON-MILES WITH LESS EQUIPMENT!**

● Motor transport equipment is easier and quicker to build. It requires less steel in relation to its carrying capacity than any other type of freight-hauling equipment. For example, less than 13,000 pounds of steel go into a Truck-Trailer combination that easily carries 32,000 pounds of freight . . a ratio of 1 to 2.46.

In contrast, approximately 56,000 pounds of steel go into a freight car and proportionate locomotive weight to carry 100,000 pounds . . a ratio of 1 to 1.78. **THUS, A POUND OF STEEL IS APPROXIMATELY 40% MORE PRODUCTIVE IF MADE INTO A TRUCK-TRAILER.**

● Motor carriers work virtually **EVERYWHERE!** That's fortunate, because several military cantonments and localities with vital defense industries are not on railroad lines. **BUT TRUCK-TRAILERS TRAVEL WHEREVER ROADS . . EVEN DIRT ROADS . . RUN.** Yes, motor transport covers the map!

THE job demands the shoulder-to-shoulder efforts of all transportation methods. Motor transport stands ready to handle its increasing share . . working 'round the clock, 'round the calendar, 'round the map!

**FRUEHAUF TRAILER COMPANY • DETROIT**  
Factories: Detroit, Kansas City, Los Angeles, Toronto

World's Largest  
Builders of  
Truck-Trailers



Sales and Service  
in Principal  
Cities

When troops from army camps throughout the country go to the war maneuvers, motor carriers provide Truck-Trailers to carry the food and equipment. This serves also as a test for the transport companies and their drivers . . a rehearsal for possible actual combat conditions. And motor transport has come through handsomely . . as did the soldiers in their maneuvers!



# FRUEHAUF

"ENGINEERED  
TRANSPORTATION"  
REG. U.S. PAT. OFF.

# TRAILERS

MOTOR TRANSPORT IS ESSENTIAL TO NATIONAL DEFENSE



# Industry Is Going "Great Guns"

By PAUL McCREA

**W**ILLIAM S. KNUDSEN, of O.P.M., is a blunt man. He called K. T. Keller, Chrysler Corporation president, on the telephone.

"K.T., will you make tanks?"

"Yes, Bill. Where can I see one?"

The date was June 8, 1940.

In that two line dialogue is compressed the whole kernel of the American defense effort: the urgency, the willingness and the inexperience that have characterized our struggle to become a military power.

As Knudsen spoke, young corn murmured in peaceful growth in a field 12 miles from Detroit. In contrast, across the fields of France, the incredible blitzkrieg raged relentlessly toward Paris. Belatedly aroused, our Government wanted tanks.

It is a paradox that a nation christened in the blood of an eight year revolution should spend the rest of its life with its head under a pacifist bushel; that a people who believed the right to bear arms worth protecting by constitutional guarantee should ignore the warnings of those who urged them to exercise that right. Far-seeing groups—the United States Chamber of Commerce among them—have long noted this deficiency and cried out for national preparedness.

Amorous cats on back fences have drawn a larger audience.

We have preferred to listen to those who assured us that, in time of need, "a million men would spring to arms overnight." Thus, as always, when the President proclaimed an unlimited emergency, the patriotic million poised uncertainly. There were no arms to spring to.

So the nation wanted tanks. Mr. Keller might see one at Rock Island Arsenal.

Accompanied by mechanical and engineering executives, he went there. His party saw a tank. They rode in it. They measured here and probed there. They returned to Detroit lugging 186 pounds of blueprints over which 197 men worked for four weeks, analyzing, estimating, figuring, making layouts.

Shortly that corn field near Detroit knew a blitzkrieg of its own. Steam shovels came gouging craters. Engines started puffing steel girders into position. And throughout the land arose a cacophony of calamity.

**Even junk heaps have helped, not only with materials but machines to work them**







**The plowshare and the sword. We led the world in making one, had no tools or talent for the other. In 16 months industry has built the tools and developed the talent**

The Government and people wanted tanks. And still there were no tanks.

September. October. November. December brought vicious weather. Workmen gave up holidays and weekends to stand in knee deep slush pouring 51,000 tons of concrete. It snowed. They blew on stiff fingers and erected 6,500 tons of steel in 70 days. They were putting up a building two blocks wide, five blocks long. You could put four Yale bowls in it if you wanted to—but the Government wanted tanks.

Before the building was done, they had some—two 25 ton samples. Eleven months after the first ground was broken, they had more. By then, 1,000 heavy machines, 8,000 tools, gauges and fixtures had been designed, built and put into operation. Today from that former cornfield, tanks are pouring out at the rate of 15 a day. Of 79,000 vehicles of all kinds contracted for, Chrysler has completed 60,000.

All right. So we have tanks.

Not as many as the Germans have, or the Russians. Not as many as we need. But more than we would have if industry wasn't going great guns. More than any other country could have had in the same time if it had started from scratch as we did.

Those who complain that our shipments of materials and supplies to Europe are only a trickle—a statement that, on its face, seems damning—forget that the length of the race affects the time of running. We have felt, in our conceit, that we as a people were more mechanically gifted, smarter, more efficient than any people anywhere.

Within limits, that estimate is correct. If it were not our defense program would blossom today only in the sonorous oratory of statesmen passing appropriation bills and warning the world that we have a tremendous military machine “on order.”

No one expects a pool shark to be a great basketball player merely because he is used to dropping a ball through a hole. Yet we have permitted that kind of vagary to color our defense expectations. We overlooked the fact that a lipstick and a shell primer set off different kinds of dynamite, and that the man who made the former would need to learn to make the latter.

Today he is learning. It is not an easy lesson because a lipstick, whatever the ladies may think, is not a precision instrument. A shell primer needs to be accurate within a few thousandths of an inch.

Neither is it easy for an agricultural implement fac-



tory to turn out combat wagons and gun carriages; for a refrigerator plant to make airplane parts; for a printing press maker to make howitzer recoil mechanisms; a pipe organ works to fashion saddle frames or a steel casket plant to make bomb casings.

Such changes would not be possible at all except for the productive ability and ingenuity of American industry. Even then it's a tremendous job; much bigger than any of us realize.

## 1 ★ The cow pasture phase

**Two guns in five months. Centimeters and inches. An old tool room. 25 per cent fewer parts. A wheat field outside Elizabeth. 125,000 carloads of dirt. A \$1,000,000 plant in 100 days. Giants in 90 days. First buildings, then arms**

TAKE anti-aircraft guns!

In February, 1941, the Firestone Tire & Rubber Company was awarded a contract to do the necessary engineering and designing for construction of two Bofors Anti-Aircraft Gun plants and subsequent production of gun carriages.

Five months later they delivered two guns to the War Department.

"And that," cries the critic, "is an example of our boasted mass production. Two guns in five months! What kind of a triumph is that?"

Well, let's see.

The first need in building machine guns is drawings of the parts. Firestone got them late in February from Sweden, Canada and England—scaled in millimeters. American machinists work in inches. Shortly afterwards an actual gun arrived from England.

On the third floor of the Mechanical Building—space formerly used for pattern storage—100 engineers and draftsmen went to work redrawing plans and changing centimeters to inches. Renovating the workroom, installing lights and equipment took two weeks.

Out-of-doors, other workmen were busy. Two gun plants were needed. Ground was broken May 1. Thirty-five working days later, machinery was being moved into the smaller unit. The larger unit—625 by 326, two stories high—was mostly under roof, the steel work completed.

In the old tool room, something more than a copying operation was going on. American ingenuity was redesigning as it went along. When the plans-in-inches were ready, they called for 25 per cent fewer parts than are used in the foreign-made Bofors gun; welding was substituted for riveting on the gun carriage, adding strength, reducing cost; a large swivel bearing was re-

drawn to use commercial ball bearings which could be made on existing machinery from standard bearing material. Another suggestion speeded broaching operations, adding 50 per cent to efficiency, avoiding purchase of additional equipment.



EWING GALLOWAY

**Shipbuilders completing 58 vessels in eight months are far ahead of schedule**

Such changes are expected to save more than \$1,000,000 in fulfilling the contract.

All that in five months!

Or take M-5 tank guns.

On October 15, 1940, New Jersey breezes played with a wheat field outside Elizabeth. Three months later a building stood there. On March 3, power was turned on and, although the plant was only ten per cent tooled up, American Type Founders started making M-5 tank guns.





H. ARMSTRONG ROBERTS

**Making arms is not as easy as squeezing water from a sponge, although many seem to think so**

Reduced to essentials, the story is as simple as that. Unfortunately overlooked is the tedious tale of experience, ingenuity and adaptability that makes the simplicity possible. American Type Founders, in taking the contract for tank guns, counted heavily on past experience with sub-contracting. The gun itself involves 30 sub-assembly jobs. Today 20 companies supply those sub-assemblies. Thirty-one others supply major parts requiring no assembly. Coordinating production of 51 separate concerns is not a job for novices. American Type Founders knew the technique, employed it, and defense took another bound forward.

These aren't isolated instances. In Vancouver, Wash., the Aluminum Company of America sliced 125,000 carloads of dirt off a hilltop cow pasture; hauled materials from 40 states to build an aluminum plant that will cover 55 acres. At Bayonne, N. J., a \$1,000,000 plant, built in 100 days by the Electric Boat Company, is turning out motor torpedo boats; in New England a six story factory is making arms on what, four and a half months before, was a weed-grown vacant lot; in Kansas, a plant 1,000 by 330 feet

is turning out bomber parts where 13 months ago farmers were plowing.

At Milwaukee, Geuder, Paeschke & Frey Company found it necessary to enlarge their plant because of defense orders. But enlargements take time. Wrecking the old buildings and putting up new ones would have delayed production. Moreover steel and other building materials were extremely hard to get. Ingenuity was available, however.

The company bought an old building, 312 by 65 feet, tore it down and rebuilt it over the existing plant which continued to operate. When steel structural shapes of the dismantled building failed to fit in the new location, the company refabricated them on the premises. Short of brick and wood, they picked them up at sites where other old buildings were torn down.

The changeover was done in five months. Today the improved layout is saving as much as 23 days productive time on some jobs.

## "We can do it"

These new plants, of course, are as much a part of the defense picture as the weapons that come out of them—although that fact is generally ignored. Arms cannot be produced in ramshackle factories, in tumble-down sheds or in tents—although, such was our unpreparedness, American industry has frequently done it that way until better equipment could be found. It has, in fact, turned out armament under all sorts of impossible conditions, gladly accepting contracts knowing that it had no room, no machines, no trained men, and coming through ahead of schedule.

C. A. Tilt, of the Diamond T. Motor Car Company, put the attitude into words:

"If it can be done, we can do it."

Ninety days after he made that statement, Mr. Tilt's company had designed, built and tested a pilot model of a tank transport, provided necessary materials and parts, had subcontracted and arranged for simultaneous production in two plants and was already turning out finished tractors from a new production line. Incidentally a tank transport is a giant tandem-drive, six-wheel Diesel tractor, weighing 27,100 pounds without load or trailer, larger and more powerful than anything of the kind ever built in this country.

Most people would have said that couldn't be done. They would have added that Hudson Motors couldn't put up a 14 building plant with a 1,000,000 square feet of floor space in seven months.

They did!

Ground was broken March 17; first concrete was



poured March 26; steel work started April 17; brick work, April 30; first floors were poured May 20 and machines began to come in.

So this country will have Oerlikon anti-aircraft guns.

This is getting repetitious. People don't read about building operations so avidly as they watch them. Moreover, wars are not won with buildings. They help. Designed and built by men who know how, they provide the best possible conditions of temperature, lighting, convenience for those who will make the weapons to keep this country free. Without the buildings we could not hope to keep pace with European war makers.

## 2 ★ Swords from plowshares

**A peace-minded people. Steel sandwiches weighing 650 pounds. One connecting rod, 93 operations. The six-wheel drive. "Like hunting rare stamps." Guns from junk piles. "We'll make 'em ourselves." Rumpelstiltskin outdone. "Guns are machines, aren't they?"**

EVEN WITH THEM, our effort would be pitifully slow except for the machines they house.

On those machines, and the proper use of them, depends our defense effort. That is not a new situation for this country. We have already learned to depend on them for our peace-time standard of living. But for machines, we would have few automobiles, vacuum cleaners, washing machines, radios. They gave us mass production of those things.

Why then can't they give us mass production of war material?

Let O. E. Hunt, Vice President of General Motors, explain it:

Our peace-time design of military equipment has been for small lot manufacture. The American public and American industry have not been war-minded. Industry's equipment has been chosen for the continued mass production of the job in hand, without thought of its conversion to war work, as is common in other nations. Therefore, the equipment of industry is relatively inflexible and unadaptable to this military material designed for small lot manufacture. Different machines must be obtained, different fixtures must be procured, different processing used and, most important, skilled operators must be trained before mass production can start.

To demonstrate what he means, consider armor plate. It's made by slapping 650 pound slabs of steel



TRIANGLE PHOTO SERVICE

Many plants could not expand more rapidly because workers had nowhere to live. So housing became important to defense. One company has built 600 homes, plans more



together like a sandwich and cooking them at 1,600 degrees temperature for a week. Then they have to cool for another week. Since there are 8,000 pounds of armor plate on a 25 ton tank, that means a lot of sandwiches. American Car and Foundry Company undertook to make it. They needed furnaces and a huge new plant which they had to enlarge three times before it was even finished. Once they got into production, they made armor plate that hasn't yet failed to pass the Army's tests.



Tooling for the bomber program alone will cost as much as the Panama Canal

Or take tank transmissions. They're complicated things weighing almost twice as much as two whole automobiles. Or airplane engines which have some 8,000 parts, on one of which—the connecting rod—there are 93 distinct machining operations. There are 25 on an automobile connecting rod. Even motor trucks cannot be inducted into military service as is because commercial trucks deliver power only to the rear wheels. The Army wants four or six-wheel drive.

To meet that kind of challenge well and quickly we needed new and rigorously adapted machines. Ordinarily we depend on the machine tool makers for that

job. There were some 250 of them in the country. In 1938 they had produced about \$145,000,000 worth of machine tools. In 1939, they raised the figure to \$200,000,000 worth; in 1940, to \$450,000,000. This year they are expected to hit \$750,000,000. In August alone they turned out \$64,000,000 worth, a new high record.

One single company has jumped production from \$500,000 to \$9,000,000 in two years. To do that they tripled their floor space and revamped a plant that was producing candy-making machinery. Now it turns out portable repair kits for the Army's mobile units.

This record explains why the machine tool industry has been almost wholly exempted from criticism in the defense effort. It has done an excellent job; but excellent jobs take time. It takes ten months, for instance, to build a bullet machine. After that it turns out bullets at the rate of 600 an hour. Other machines take even longer—as much as 18 months—and, before the job can be started, the builders have to find out just what types of military equipment are needed, then plan and design the machine tools that will build this equipment.

## No cheering section

Other industries might reasonably have waited for the machine tool makers to come through with the needed machines. Standing on the sidelines they would have made an encouraging cheering section which the tool makers deserved but haven't had.

They didn't stand there.

Instead they turned their mechanical know-how and ingenuity to getting the job done with such tools as they had at hand, could assemble off junk piles or rejigger to different uses:

The High Standard Manufacturing Company, target pistol makers of New Haven, prepared to make machine guns. In five months they had a building on what had been a cow pasture, but tools were lacking. Gordon Swebilius, purchasing agent, went looking for them "like a stamp collector hunts rare old stamps."

He toured the country buying second-hand and scrapped machine tools. Some he took off a dock where they were about to be shipped to Europe; some he found in government arsenals where they had been replaced. At the factory skilled machinists took them over, cleaned them up, scrapped some to get parts for others. Some hadn't been used since the World War. Some were 75 years old.

Today they are producing machine guns two months ahead of schedule.

Turn now to Pottstown, Pa., where the Jacobs Air-



craft Engine Co. is making power plants for training planes. Back in June, 1940, they needed special multiple drills that would drill 28 holes at once, turret lathes and an internal grinder.

They were told to wait their turn.

"Wait, nothin'," they said. "We'll build 'em."

They did. A Middle West manufacturer had a stock of drill heads of the simple type used in every-day machine shop work. The Jacobs Company took 200 of them, equipped seven with double bits and mounted them on a single base. That combination drills 14 holes, tolerance one-one-thousandth of an inch. Then compressed air flips the fixture to a new position and the second 14 are bored. Others of the 200 drill heads were adapted to the job that needed the turret lathe, or seemed to.

## Revolt of an appendix

The internal grinder was a stiffer proposition. It was needed to grind the holes in master rods.

"We'll bore 'em," the company decided. Experts assured them that no metal on earth would bore such holes. When the first bit bored two holes and collapsed, the experts nodded and went elsewhere. The Jacobs workers stuck around. Now they drill the holes in seven minutes. Grinding would take five hours.

This wasn't spur-of-the-moment stuff. It was taking 16, 18, sometimes 20 hours a day. In the midst of it, Donald F. Turner, factory manager, developed the granddaddy of all tummy aches.

"That's appendicitis," doctors said. They recommended an immediate operation.

"Not now," said Turner. For six weeks he continued to spend 16 hours at the plant. Then he went home and strapped ice packs on the sore place.

The appendix didn't crack, but another bottleneck did. That had developed because enamel on cylinders took eight hours to dry in good weather. On wet days it took 15. They hung the cylinders on movable racks and hauled them under infra-red lamps. Now they dry in six minutes.

There ought to be a word to describe that kind of enterprise. Some have called it "productive ability." That's a lack-luster sort of nomenclature unworthy to describe what is perhaps the most dynamic, united effort any nation ever made.

There's drama in it. And excitement! And surprise! Rumpelstiltskin spun a roomful of flax into gold in a single night and demanded the Princess' first-born as a reward. American enterprisers have done more amazing things than that and called them, in the words of the

Link-Belt Company, "Just another job." They are looking for efficiency rather than excitement. Baldwin Locomotive Works, making locomotives, Diesel engines, hydraulic machinery, turbines, testing machines and instruments—all basically essential to defense—took on barbettes, tanks, gun tubes, shell forgings, naval gun mounts, as well as a number of products of a confidential nature. When their retooling program had to be curtailed because of priorities, they redesigned and rebuilt old machines. Yet, W. H. Winter-



**Soldiers now move as far in 20 minutes as armies once moved in a day**

rowd, company vice president, reports, "We have had no colorful incidents."

Overcoming problems is just part of the day's work.

Army Ordnance officers brought guns to members of the automobile industry. They were beautiful guns, hand-built by skilled gunsmiths. But hand methods were too slow even if skilled technicians had been available.

"Do you want guns as beautifully finished as these?"

"No," the Army men said. "We want efficient guns and a lot of them."

Most of the auto makers had seen machine guns only



in gangster movies. But they knew steel, they knew technique. They knew machines. By the way, were there any machines?

There were. They were in store rooms; belt-driven antiquated rattletraps ranging from 21 to 73 years old.

"They're the best we have," the Army said.

The automobile industry cleaned and adjusted them; it reinforced them with machines off its own production line.

Meanwhile a tough old master mechanic was examining the weapons. He had never seen one before but he wasn't impressed:

"Guns? They're just machines, aren't they?"

They were, and American industry knew how to make good machines in a hurry. It wanted to know why bores must be drilled slowly and laboriously with a horizontal drill. No reason. So a special machine was built to drill six barrels at once with gravity and oil under pressure assisting the vertical drills.

Rifling the barrel called for 15 trips of the chiseling tool until production engineers reduced the operations to two, taking one-thirtieth of the former time.

Specifications called for hand-filing of small parts to achieve close fits but the craft of hand-filing has been just about forgotten in automobile plants. It is quicker to machine these parts to small tolerances and then dump them in a tumbling machine—a finishing method

borrowed from manufacturers of sewing machine parts.

For the loader mechanism, specifications called for stainless steel which is notoriously hard to machine and getting difficult to obtain.

"Why not use something else?"

"Other steels will rust," said the Army men.

"True," the mechanics replied, "but since when have soldiers allowed guns to rust?"

The Army men grinned.

"You win."

Result, another time saving. So it went with the breech ring; with the shell clips which are now stamped out of sheet steel, a process that saved 5,000,000 pounds of aluminum on the first order; on barrel jackets where punching round holes instead of grinding elliptical ones reduces ten operations to almost nothing.

Technique developed in the manufacture of valve stems was used to make firing pins; rivets, formerly ground one at a time from bar stock, pour out of a header machine at the rate of 180 a minute; side plates, formerly milled singly, are ground out six at a time.

Result: the first consignment of machine guns turned out in automotive factories was shipped to an arsenal eight months ahead of schedule.

Automobile men had no monopoly on this kind of thinking. Having ordered three specialized machine



This six-wheel drive, Diesel motored tank transport weighs 27,100 pounds. The pilot model was turned out in 90 days





Cessna's "Witamin Wagons" are mobile electric ovens which bring plates of hot food to workers on the job, provide good food quick, take little space

tools for turning down the inside and outside of 81 mm. trench mortar barrels and being promised delivery "God-knows-when," the Pullman-Standard Car Manufacturing Company converted three old engine lathes to do the job and went ahead. This same company makes a small bracket for holding accessories inside the British M3 tank. Ordinarily this would be a job for a forming press, but the company had other things to do with presses. Somebody discovered a pile of parts from junked freight cars. Now the old cylinder from the air brake system, a die fastened to its plunger, is turning out tank parts.

Airplane production has been speeded by the Guerin Process, developed by Douglas Aircraft Company, Inc., by which rubber, under terrific pressure, becomes as hard as steel and serves as a die in hydraulic presses, cutting and forming sheetmetal airplane parts rapidly and efficiently.

From Lockheed came the Triplett & Barton X-Ray machines which speed inspection of airplane parts, and the magnetized bucking bar which simplifies riveting in cramped quarters.

Thompson Products came up with automatic thread grinders, designed and built by Jones & Lamson Machine Co. Adapted to precision operations on exhaust valves, they perform seven operations automatically at one time. Work which used to take 20 minutes is now done in one and one-half.

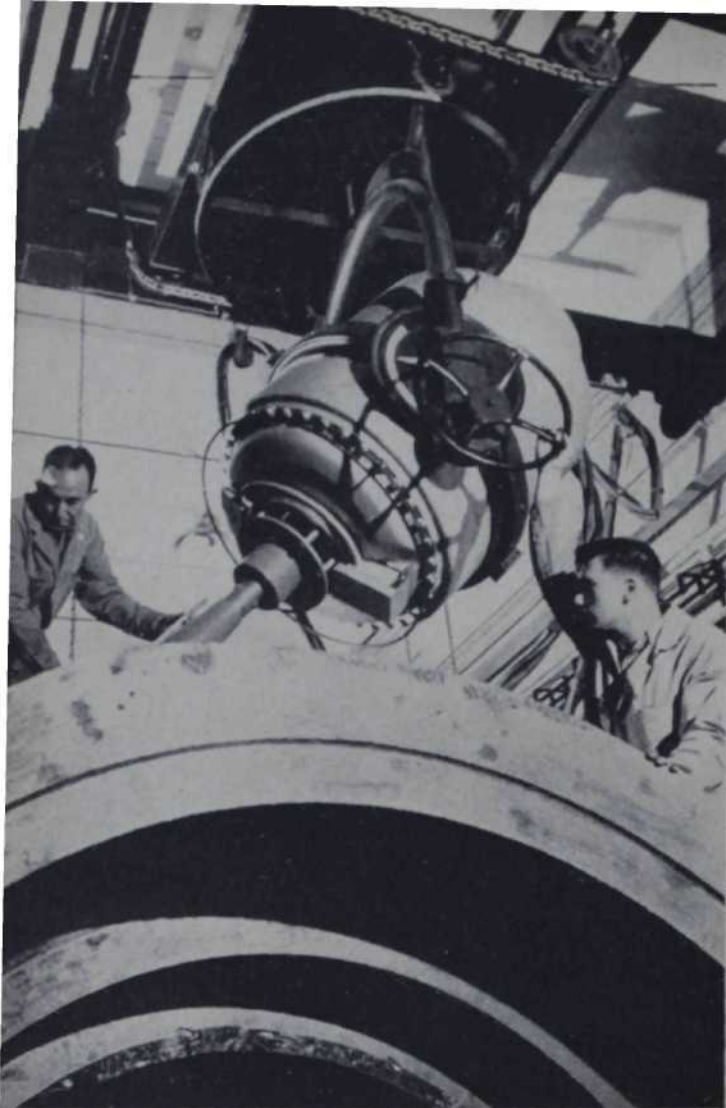
Allis-Chalmers converted an old agricultural and road grading machinery plant, refurbished the old machinery and now makes mounts for anti-aircraft guns. Entering another field, the company observed that, in making turbine blades for the motors of fighting ships, only one end of the cutting tool was used.

They put a stop to that. Now both ends are used, two blades are machined in a single operation and production jumps more than 300 per cent.

This could go on and on: boats are being built upside down, ships are being welded instead of riveted; where rivets are used, the ends frequently explode, thus locking them more tightly and quickly. Or else "ice box" rivets are used, stuck into place and left to swell tightly in the higher temperature.

Naturally some lines have gone forward faster than





Inspection was quickened, made more exact with this 1,000,000 volt X-ray machine

others; naturally there have been "bottlenecks," confusion, uncertainty, disappointments. Naturally some production has been pitifully slow—heavy bombers, for instance. Almost everybody asks:

"Why don't we produce planes like we build automobiles?"

Arthur A. Schwartz, of Bell Aircraft Corporation, gives some reasons:

About the only similarities between an airplane and an automobile are that they are both vehicles and are propelled by gasoline motors. Even here, there are dissimilarities because aviation gasoline is quite different from commonly used automobile gasoline.

The automobile owes its popularity to two factors: reliability and cheapness. In engineering the motor car those are of supreme importance. Secondary factors include operation, luxuriousness and performance. Weight is considered only after these others are satisfied.

In airplane design the priority among factors is in the reverse order. Lightness and strength are the two supreme factors.

This difference in values leads to dissimilar methods in automobile and aircraft manufacture. In the auto

plant, material is selected with an eye to machinability and cheapness. In the plane factory it is selected for strength, durability and light weight. Frequently such materials are harder to machine. In the auto industry models are changed once a year. In airplanes, if the engineering department discovers a method for increasing performance, that change is immediately applied in the production lines.

## If autos were like planes

"Designers are unable to add a piece of metal without utilizing its strength," says Mr. Schwartz. "This often requires redesigning of a dozen or more parts, not only to make room for the added piece, but also to use it as a structural member and thus save some of the added weight."

He adds that an automobile does well if its weight is less than 60 pounds per horsepower. Airplanes have about ten pounds per horsepower.

"If an automobile were built like an airplane," he says, "it would weigh about 300 pounds. It would cost like the devil and probably not be worth a damn."

Delay in building bombers is even more understandable to those who realize that the tooling for the bomber program alone calls for expenditures equal to the cost of the Panama Canal.

But, on the whole, we can take some pride in the fact that 1,854 airplanes were built in August as against 200 a month in 1939; that airplane engine production is up to 4,500 units a month; that, in the first eight months of this year, we turned out 58 ships of 630,000 deadweight tons; and production of the raw materials which go into these weapons—steel, magnesium, brass, copper, aluminum, almost everything, is keeping pace.

These figures will increase rapidly. They would increase more rapidly if war's demands were static. They aren't. Each advance in offense means changes in defense, or *vice versa*. The eight machine guns of the British Spitfire made the armament of other pursuit planes obsolete. There is constant call for more fire power, ceiling, armor. Designs must constantly be changed and even a small change frequently requires extensive retooling.

And the most peculiar requests come in. The Army wanted a wire weighing only 30 pounds to the mile that would carry a phone conversation after being soaked in water for a week. U. S. Rubber went to work. The wire is now being tested.

All of this means an unending succession of new bridges which industry crosses as it comes to them. In peace-time operations, Cessna Aircraft Company re-



quired 24 man hours to shape a laminated spruce wing spar for its T-50 model. It cut that time to 20 minutes with a special jig and a peculiarly shaped track. The rough spar is placed on the jig, a motor driven saw rides around the pattern track and cuts the timber to exact specifications.

Inland Steel Company, without building new furnaces, arbitrarily set production figures for ingots 200,000 net tons ahead on January 1 and upped the figure another 50,000 tons July 1. They are still operating at 100.4 per cent of these inflated capacity figures. Diverting steel from other departments, they have pushed the production of plate—needed for ships, pipe lines, freight cars—to twice the department's estimated capacity of 25,000 tons a month.

Shell Oil Company engineers have perfected a system by which 12 or 13 different products can be passed in continuous movement through the same pipe line.

For every type of problem somebody has bobbed up with an answer. Pullman Standard Company employees turned up 1,500 suggestions to meet defense problems. In six months, 390 of these were adopted.

One man alone offered 67. As a result, the company has been able to make trench mortars, shells, howitzer mounts, tanks and airplane parts while still turning out a railroad freight car every four and a half minutes.

Lyon Metal Products, Inc., found itself committed to turning out Army trunks. But, since most of its normal products were going into expanding facilities for other defense plants, it couldn't sidetrack its regular work. It conquered this dilemma by building an Auxiliary Defense Department on "roller skates." Now regular production goes forward until 3:30 each day. Then the Defense Department, complete with its own portable assembly line of roller conveyors and all needed tools, is wheeled in. It turns out 1,600 locker trunks a day.

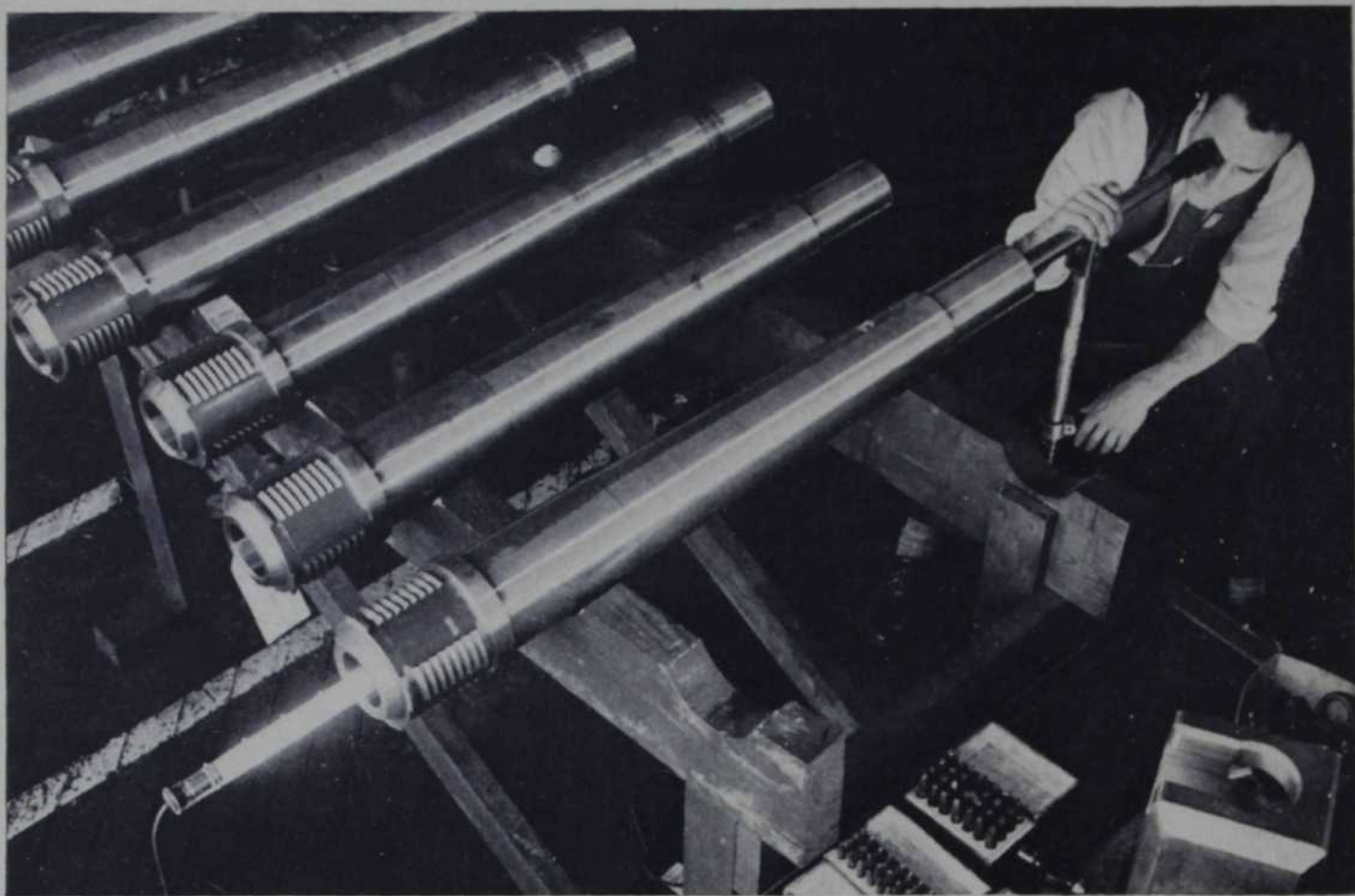
Equally spectacular advances were made in front offices, planning divisions and research laboratories.

When Diamond T, White and Autocar, traditional competitors for more than 30 years in the commercial field, received orders to make identical vehicles for the military services, they got together, delegated all purchasing and subcontracting to a joint purchasing com-

**Allis Chalmers' crews worked 24 hours a day getting this first 90 mm. gun ready for the Army. Finished ten minutes before it was presented**







The boroscope, used to inspect gun barrels, lights the surface and magnifies it 20 times so that defects will stand out

mission, divided freight charges, balanced inventories and shipments to maintain uniformity of production speed as completely as possible.

Such abandonment of old rivalry in the face of national need is not unusual. Recently the Allegheny Ludlum Steel Corporation patented and put on the market a high speed steel which has one-third less tungsten than more commonly used types. The rearmament effort brought a tremendous need for high speed steel and a shortage of tungsten. The company acted at once announcing that it would give free license for the use of its patented steel with no strings attached.

In passing, we might note that other companies did not let pride prevent them from accepting the offer. Many licenses have been granted.

Elsewhere front offices have been busy coordinating efforts of subcontractors and suppliers. One concern alone cooperates with 296 subcontractors and 41 raw materials firms.

All of this would be little help without the plans and drawings which guide the tool builders and operators. There is little paper in a battleship but the blueprints necessary before the first rivet can be driven would fill

a box car. After they are made, these drawings must be transferred to metal or plywood patterns. That calls for tedious and skilled handwork. Eastman Kodak Company stretched that bottleneck with Matte Transfer film which reproduces the drawing on the pattern photographically. In five months this saved one aircraft company \$500,000.

Science has contributed elsewhere in equally helpful but unsung ways, providing new materials, finding ways around scarcity. Cotton parachute cord is one development, needful because linen formerly used came mostly from Ireland, Belgium and France. Research provided a new technique which compresses cotton fibers together under pressure. This met that need; saved valuable materials.

Another saving, less spectacular, was made when a General Electric Company worker suggested that strips from which small parts were made be cut seven-thirtieths of an inch narrower. That will save six tons of steel a year.

Nothing has been too small to try as the Lockheed people demonstrated. In an operation in the narrow boom of the P-38 plane it was impossible for a man of



ordinary size to get into position to do the work. They hired a midget.

There is no need to labor these demonstrations. Neither should they be expected to astonish anybody. As an Eastman Kodak official puts it:

American industrial research has a whole peace-time civilization to its credit; so it is not remarkable that some research projects, begun in time of peace, have paid out in defense value. Six or seven years ago the Kodak Research Laboratories began research on a rare-element glass. That research bore fruit in time for the new glass to be incorporated in improved aerial lenses designated for the Government.

Other peace-time developments which have enlisted for the duration include the throat microphone, originally developed for the use of miners. Western Electric Company is making them for pilots of combat planes. The same company developed a pulp insulation for telephone cables.

## Open door for "Screwballs"

It saves only three one-thousandths of an inch in the diameter of an insulated wire but that saving makes it possible to pack 4,242 wires into space that used to hold 3,636. This helps eliminate a troublesome bottleneck in the communications defense effort as does the method of using an electrical charge to dry newly made telephone cable. Each reel of cable picks up about seven gallons of moisture in the course of manufacture. Once this was removed by a baking process which required 15 hours. The new process, developed in peace-time, takes an hour and a half.

Men who have been so continually persistent in seeking new tasks to perform or better ways of performing old ones are not readily stampeded even when the new task happens to be rearmament. Edward G. Budd, president, the Budd Manufacturing Company, sums it up quickly:

Great developments rarely come into being overnight. They usually linger in the thoughts of men or in laboratories until some opportune moment permits their use. Sometimes that moment never arrives and a great idea may be lost to society or industry. War and other great emergencies supply the big opportunity and then, later, peace-time activities continue to benefit. So, what we hail as the achievements of war production have usually been lying dormant or under slow development for years. They spring suddenly into becoming determining factors of our immediate need.

The use of alloy steel for structural purposes, for instance, becomes a standard rather than an exceptional practice. New methods of heat treatment have advanced from the experimental stage to a point where they are indispensable now and for the future. Precision methods make for an interchangeability which vastly extends our production capacity. Mineral

shortages have been circumvented by the ingenuity of the metallurgist in devising new alloys—and often better ones.

This is the American way. It may be slow in starting, but once started gives us a lead over every other country in the world, and in a war of materials rather than men, production wins. Production gains, furthermore, are never wiped off the books as war losses.

The American way that Mr. Budd mentions has been manifest in a thousand different research establishments, laboratories, proving grounds, suggestion boxes and training schools.

Says Director F. C. Crawford of Thompson Products:

Some time ago we put in a "Director of Screwballs." It is a division of research. That director's job is to interview inventors and get the best things that might apply to our business, give the inventor the patent and enter into a royalty contract with him. We will pay this year large royalties to such



This machine replaced 39 old ones, finishes a cylinder head in 48 seconds



inventors who have brought us things that we never would have got ourselves.

In other plants, suggestion boxes testify to the universal thirst for new ideas. Such boxes collect a startling miscellany, ideas for saving sweeping compound tumble out beside recommendations for rebuilding ten-ton presses. But every worker knows that his idea will be examined. If it is used, he gets a bonus. If not, he is told why, even if apparatus must be built to demonstrate its failure.



Company and government experts each check aiming circles at 94 points—total inspection time, five hours

Perhaps no one knows the part suggestion plans have played in defense, but it has been large. One company where the plan was started in 1921 reports that, when defense contracts came in, workers had a lot to offer about better methods of producing armaments.

"The number of suggestion awards immediately jumped."

One who collected was a building superintendent's clerk who overheard a conversation regarding the difficulty of milling hard alloy steel. He suggested a new shape of cutting edge on the milling tool. It saved transferring the job to several other machines which would have meant three or four additional operations.

For the General Tire & Rubber Company, a tailor's son, hired to do a particular job, suggested the use of a power cutter for making patterns in multiples. This saving in time, men and money permitted General to clear the decks for further balloon orders.

At Firestone, engineers blush at the mention of Miss Jeanette St. Denis. Firestone has long encouraged suggestions from employees and reports:

They seem to realize that this project is to provide defense equipment for their own country and things they love most. They are eager to contribute everything possible.

Miss St. Denis was like that. While the engineering department was working out a special device for cutting wire needed in gas masks, she was put to work using makeshift equipment. The next morning she showed up with a wire cutting tool her father had given her. Working in her own way, she cut wire so fast that the complicated machinery was abandoned.

Waclaw Dasziewski, a General Electric boring mill operator, devised a metal yoke that permits one machine to replace three in making bearing rings and self-aligning bearings for battleships.

So ideas gushed in and were adopted. Buildings went up and were filled with machinery, newly built, or reconditioned.

### 3 \* 18 workers per soldier

From 24,000 to 74,000; from 8,500 to 100,000. You can't just say, "Gouge here." But industry knew what to say. Trade schools and apprentice courses. A week of shop arithmetic. Then blue prints. A waiter makes machine guns. A cook makes shells. "We turned the whole place into a school." Fifty years making cork. From soft drinks to ammunition. "I had to learn all over again."

YET the job was not done. There must be workers to operate the machines. Thousands of them.

Westinghouse is employing 74,000 men today compared to 24,000 a year ago; Curtiss-Wright Corporation has grown from 8,500 to 55,000, expects to employ 100,000 in 1942; The Electric Boat Company has 2,000 today, 380 a year ago. As for shipyards, they employ 375,000 now, will need 125,000 more by next summer, and some of them are working in a plant that made pie plates a few years ago; Bell Aircraft has increased from 1,100 to 11,000, needs 5,000 more; Hamilton Standard, airplane propellor makers, have 4,000 against 1,000 a year ago; Cessna has grown to 3,100, only yesterday it was 30; and Boeing is hunting 21,000 for a plant that, before the defense program started, was farm land.



Finding men in such hordes isn't easy. Moreover, when they were found the job wasn't done. The man who answered a want ad wasn't handed a chisel and told, "Gouge here." He needed training.

Even that didn't stump industry.

Civilian production, too, needs a constant stream of new workers, not so desperately as military production, perhaps, or in such numbers. But the method was at hand—trade schools, apprentice courses, training under experienced men—it had merely to be enlarged.

## Mass production of skill

Many companies operated their own schools. Winchester's is a good example. Started in 1934, it enrolled young high school graduates from the company's employees, gave them an intensive three-year course and then turned them out as skilled mechanics. Students were paid on an increasing scale as they advanced through the training.

Men so trained became a backbone of the defense effort. Three-year courses were too long in this emergency, but skilled instructors can cram much into a little time.

The skilled men went to work as instructors.

The Wright Aeronautical Corporation moved 300 such men from Paterson, N. J., to Cincinnati, hired all the unemployed workers they could find in that area and then started vocational training. Out of 12,000 men to be employed, they expect to train between 8,000 and 10,000. And it won't be a snap course. Trainees spend a week at shop arithmetic, science, reading operations sheets and handling measuring tools. If they pass examinations on those subjects they get a crack at machine tools where they work for three weeks under experienced operators.

Surviving that, they are assigned to machines where a veteran operator coaches them for weeks—months sometimes.

That takes time, but it shows results. A jaunt through today's armament plants reveals a jeweler, a church soloist and a former waiter making machine guns; a former milkman operating a vertical board mill; an insurance salesman helping make machine tools; a professional hockey player running a grinding machine; a former Navy cook making shells.

That hasn't been easy. One employer who turned from making women's compacts to shell fuses told an interviewer:

We turned the whole place into a school. Night after night we'd work till we were all in, knock off for a few hours on a bench or on a desk and then go back and slug away at making

the parts right. In spite of it, we wound up three months late in delivering this order—and lost money to boot.

The record shows that, when the first order was finished, the company bid on 4,500,000 more pieces—and completed them three months ahead of schedule.

The training job was made tougher because it was not only green men who needed training. At the Armstrong Cork Company, men who have spent from ten to 50 years making cork products are now making shells. None of them had ever seen a shell tooling ma-



TRIANGLE PHOTO SERVICE

**Machines gave us our peace-time plenty. They will give us arms**

chine. They are intricate and each shell requires 18 different machine operations. Yet operation began the same day the machines were set up.

At Mergenthaler Linotype Company men are making telescope mounts, range quadrants, artillery spotting boards and various other optical instruments, who, a year ago, did not even know what such things were for. The company sent key men to Frankford Arsenal to learn the craft and teach others.

For the Pennsylvania Fishing Tackle Company and the Ocean City Manufacturing Company, former fishing reel makers are now producing delicate machine parts; The Waltham Watch Company is making taper





EWING GALLOWAY

**Defense-minded employees jammed suggestion boxes with new ideas**

pins; the Mohawk Carpet Mills are making thermal tubes; Coca-Cola Company is filling powder bags. Defense materials are shaping in hands that used to make cameras, cream separators, postage meters, bakery and cigarette manufacturing equipment.

Even workers in plants like Doehler Die Casting Company, International Harvester, Harrisburg Steel Corporation, and others used to handling heavy materials and machinery, could not swing into defense production overnight.

At the Lakeside Bridge and Steel plant a bystander watched welders at work on a gun mount wellmount—the foundation built into the deck of a battleship to support anti-aircraft guns.

"Is it done?" he asked as the welders stopped.

"They hope so," an official said, "but they won't know until it's tested. That's the toughest sort of a welding job."

Cutler-Hammer, experts in all sorts of civilian power and control systems, undertaking—among a variety of defense jobs—to work on electrical controls for submarines, estimated that it might take six months merely to design the system.

"I helped to build railroad cars in the World War," said a veteran machinist, "but tanks are pretty tough sledding. Even the rivets must be armor plated. I had to learn all over again."

At the Electric Boat Company a blacksmith straight-

ens propeller shafts with a monstrous hydraulic press.

"Only about one man in 1,000 can do that kind of work," says a company official. "It requires a keen sense of touch."

Precision is something else. Many American workmen were used to working at tolerances as small as two- or three-one-thousandths of an inch. Thousands were not. But they are learning—learning so well that Garand rifles made by Springfield Armory and by Winchester may be knocked down and the parts scrambled. Guns assembled from the resulting miscellany shoot as well as the originals.

Subcontracting increases the need for precision. If subassemblies from 30 sources are to work together, everybody has to be accurate; and some simple-appearing equipment is amazingly complicated. There are nearly 1,400 parts in a modern airplane propeller, for instance; 74 in a Garand rifle; 11,500 in a bomber's nose alone.

So genuine is the desire to meet rigid requirements that many plants have been air-conditioned—kept at constant temperature and humidity to prevent metal from expanding or contracting, to prevent perspiration from fingers causing the minutest rust.

In one plant making optical apparatus, a painstaking worker spends as much as two hours cleaning a dime-sized lens with a brush about the size of a toothpick. The lens was presumably clean to begin with but the minutest speck must be kept out of optical instruments.

## The hands that rock the cradles

While the men have been putting in long hours to demonstrate that democracy can surpass the efficiency of totalitarianism, the women have not been lagging.

Hercules Powder, opening a training school to teach powder bag printing, sewing and loading, enrolled 300 girl students. They will run electric sewing machines in bag assembly operations.

Stewart-Warner has found women far more dextrous than men assembling precision machined parts for artillery shell fuses.

"A woman brings to this job the same skill she uses in crocheting or threading a needle. She does both those things better than a man."

Hundreds of women are assembling fuses for this one company.

They're busy elsewhere, too:

At the Switlik Parachute Company hundreds of women are making and rigging parachutes, ironically using silk now scarce for stockings; at Stearman Air-



craft, 47, under a woman foreman, are making airplane wing coverings; at Western Electric they are assembling aerial radios; in a West Coast paper company, many, including three grandmothers, are working on powder bags; while at High Standard one hardy pioneer is operating an enormous drill press efficiently alongside the men.

Dictators may rant that democracy is inefficient, that we have grown too soft for war. They overlook the fact that free Americans have acquired a versatility which they bring to new tasks. They underestimated the adaptability of peace-time training courses to war-time needs.

Performance in that field already demonstrates that, though priorities and shortages of materials may complicate the picture, there will be no shortage of skill to turn materials into arms, even though someone has estimated that mechanical war requires 18 workers to keep one soldier in the field.

Nor has industry limited its training effort to itself alone. As early as 1915 the Sperry Gyroscope Com-

pany established an advanced training school which has instructed hundreds of selected men from the Army, Navy, Marine Corps and Coast Guard in the use and maintenance of aeronautical instruments, anti-aircraft directors, and a score of other navigation and range-finding devices.

When the present emergency was declared, the Ford Company suggested that its trade school might be of use in training recruits in the mechanical branches. The offer was accepted December 5, 1940. New facilities were required. Ground was broken December 6 and, less than 40 days later, on January 12, the administration building, Barracks "A", mess hall and galley were completed. By April 1, the first class of naval recruits had been graduated and dispatched, available for duties at sea.

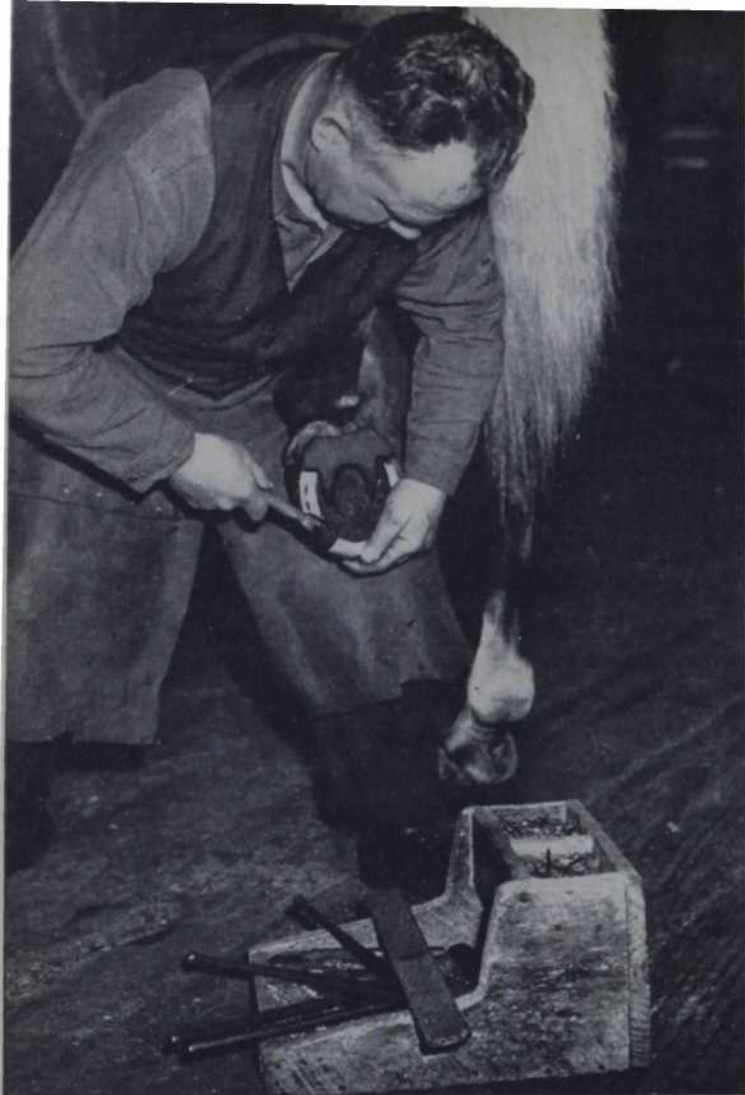
Today 1,500 recruits are in Ford training classes, adapting automobile production methods to manufacture of airplane engines. They will graduate at the rate of 630 a month as skilled mechanics, electricians, ship fitters, carpenters and metalsmiths, after 90-day



CHARLES PHELPS CUSHING

**At many operations women are proving more efficient than men. One plant boasts three grandmothers busy at defense jobs**





EWING GALLOWAY

**Defense has little of this but uses smiths. One straightens gun barrels, work only one in 1,000 can do**

courses. Capacity of the school will eventually be 2,000 students.

While the company is doing this, it is also building bombers, airplane engines, automobiles and blitz buggies for the army.

Westinghouse, in addition to filling more than 3,600 different defense orders, has turned its research laboratories into a real "scientific arsenal."

Cooperating with technicians from the armed services, they have tackled problems and suggestions ranging from a method of protecting battleship instrument panels against the concussion resulting when a broadside is fired, to a scheme—so far impractical—of blasting airplanes out of the sky with rings of air travelling at high speed.

Going great guns, indeed.

All industry is.

Of course, we do not have everything we need. Of course the plant is not complete. Maybe it never will be. American industry believes nothing is ever complete.

An AC spark plug executive was asked when his

machine gun plant would reach a point where production methods were pretty much stabilized.

"Hell," he said, "we've been changing things in our spark plug plant almost every day for the past 30 years. When we get to the point where we can't continue to improve our methods or products, we'll stop and let someone else have a try."

## 4 ★ Not for pay alone

**At school on nights and Sundays. Resourcefulness and determination. A union plays ball. They eat at their machines. Drilling to do their share. "I want to help America." Blistered arms and gas masks. Guns that won't shoot. 17,000,000 handkerchiefs. "We want to buy a flag."**

THAT is the spirit that has gone into defense production. Not only from management's side.

The Hudson Motor Car Company some months ago established a vocational school to train 7,000 men who will eventually be needed in a new plant. Hudson President A. E. Barit speaking:

Our workers, while still handling their usual jobs, are attending this school nights and Sundays in order that they may study the more exacting requirements of gun manufacture. I know of no better example of American resourcefulness and determination and I cannot commend their zeal too highly.

In the face of continued reports of strikes and labor disputes, that is an encouraging note. There are others.

The Doehler Die Casting Co. has an exclusive bargaining agreement with the National Association of Die Casting Workers affiliated with C.I.O.

"The officials of our union have submitted to us a proposition declaring a national emergency to exist," says Charles Pack, company president. "They agree to cooperate with management to the fullest possible extent to aid the national defense program. They suggest a joint management and labor council which will have full authority to set up policies for labor and management that will lay aside any rules and regulations that may be harmful to the national defense program, during the period of the emergency."

From everywhere come stories of men eating lunch at their machines in an effort to get out the last possible ounce of production. Lockheed reports the frequent necessity of sending home men who insist on sticking by their machines even at quitting time; Cessna met the need of the persistent workers with "Witamin Wagons," rolling restaurants which bring food to the workers at the job. There, too, the employees have formed their own "home guard." Workers are voluntarily taking military training to act as possible emer-



agency police for defense plants in the area. Two hundred members have contracted to drill 200 hours a year—officers 400—with no reward except the personal satisfaction of “doing their share.”

At General Electric a 53-year-old Polish-born worker received a suggestion bonus. He bought defense savings bonds.

“I want to do what I can to help America,” he said. “I have an old father in Poland, a sister in Roumania. I have not heard from them for some time. Here I have plenty to eat and good clothes to wear. I can sleep in peace. I like that and am willing to do what I can to keep things that way.”

At Firestone a young man sealing inner liners for gas mask cases burned his arm with hot glue. He stayed on the job.

“I’d rather have my arm blistered a little than to have a faulty mask get into the field.”

That’s why plants are able to work 24 hours a day, seven days a week. That is an important reason why the American soldier, if war must come, will shoot three times as fast as his daddy did in 1918; move as far in 20 minutes as soldiers once moved in a day. That is why there will be bombers and tanks up ahead and deadly fighting planes above. That is why he will be better fed, clothed and supplied than any other soldier ever was anywhere.

## It hasn't been perfect

The task of getting him that equipment has brought on quarrels, mistakes, misunderstandings.

In spite of them, the job is being done far faster than seemed possible, far better than has been written here. No story can list all the obstacles encountered by those who struggled for all-out production. An airplane factory, for instance, can expand no further without additional roads by which workers can get to and from the plant; at Baltimore, the Glenn F. Martin Company found a housing shortage in the way, built 600 houses, several apartments. Now the Government is building more. Elsewhere water supplies, public utilities or power have been lacking or inadequate.

No story can reveal the size of the undertaking—forgetting weapons, for the moment, army contracts call for shoe laces, theater tents, aprons, shirts, caps, socks, undershirts, overcoats, fire buckets, mosquito nets, dispatch cases, blankets, water bags, frying pans, first aid kits, 17,000,000 handkerchiefs, 37,000,000 yards of tent duck, 92,000,000 yards of khaki cloth.

No story can tell all the disappointments.

Above all, no story can tell all the triumphs. A few

have been offered as patterns. Thousands of others, equally remarkable, have been passed by. They deserve to be recorded, not for the benefit of the companies, but for the benefit of national morale.

There is a thrill in learning that American industry has already delivered to the Government \$10,000,000,000 worth of defense equipment. That is more than had even been ordered last March. It represents 5,000,000 man-YEARS of work. Ten plants are making machine guns, compared to two 14 months ago. Thirty-three new munitions plants are built or building and 13 are being expanded. Two plants—a third is building—are loading shells and a year ago shell loading was an art known to only ten men in the country. Steel ingot capacity has been increased by nearly 6,000,000 tons; the aluminum industry is preparing to turn out twice as much as in 1940, and by the end of 1942 will approach the goal of 1,500,000,000 pounds—four times 1940 production.

This has been accomplished in spite of the fact

**The first barrage balloon, made in a former gymnasium, passed Army tests**





that, as industry has gotten its sights set on one target, another has been suggested. Goals have been made increasingly more difficult—from 600,000,000 to 1,500,000,000 pounds of aluminum within a year, for instance. The size of the defense program has gone up like a balloon, from \$5,000,000,000 to \$8,000,000,000, to \$12,000,000,000 to \$21,000,000,000. . . .

Great Britain is spending some \$15,000,000,000 a year for war. Hitler is believed to be spending \$24,000,000,000. Including \$3,674,000,000 of foreign orders, we are going to spend about \$66,000,000,000 in about two years. That is three times the value of the country's railroad systems.

Dictators have gambled that parasites like strikes, and bickering and love of profits would suck the strength from every effort at preparedness.

Those parasites have appeared—in headlines they have grown bloated and grotesque. But beyond the spotlight of the headlines, managers have been listening to orders from Washington and saying, "Yes, Bill. Where can I see one?"

Grizzled master mechanics have been saying, "Guns, hell! They're just machines, aren't they?"

And in shops where taking collections has been forbidden, workmen have approached their foremen: "We want to take up a collection to buy an American flag to hang in here."

In one shop they hung 48, one for every state. A former college football player tells about it:

"We just decided we wanted to show our colors and that we fellows here in the foundry were backing Uncle Sam 100 per cent. So we chipped in and bought the flags, and we climbed up and hung them on the rafters. Then we paraded around singing 'America.'"

Being the biggest he had to carry the flag.

"I sort of wanted to," he said.

In another plant production was not going well. The foreman announced that his group would have to work Saturday. An earnest young worker stepped up:

"Ed," he asked, "do you want me to come down tomorrow? Or shall I go ahead and get married?"

Industry is going great guns.

**Defense workers: they eat at their machines, give up holidays, study in hours off, so that American industry can really Go Great Guns**



ACME PHOTO





State control makes each successful gain a sure footing for further forays

# Britain Liquidates Its Tradesmen

By A. WYN WILLIAMS

**T**HE encroachments of the State on the field of free enterprise have become increasingly bolder in England during this war. It has been a case of the inch yielded leading to the mile taken. At last, changes in the structure of the business system, which are being foisted on the community under the subterfuge of war necessity, are beginning to be challenged, and the dicta of government bureaucrats are now scrutinized for hidden motives.

An example of a new awareness of the peril which menaces private enterprise was the refusal of the Liverpool Chamber of Commerce at the end of this summer to associate itself with a proposal of the President of the Board of Trade (an official corresponding to our Secretary of Commerce) to put out of business arbitrarily, in the interest of the war effort, an unlimited number of small storekeepers. The Chamber sent back the Board's questionnaire,

**NATIONAL SOCIALISM is the enemy of British Freedoms. Yet British bureaucracy is adopting the Nazi economic lock-step... in the name of patriotism. A danger signal for America!**

seeking its views, with a most unfavorable reply and invited 35 other trade bodies to do the same. In its final observation to the Board of Trade, the Chamber said:

... the war is being used too readily as an excuse for the advancement of theoretical ideas which are at variance with moderate opinions and which, under more normal conditions, would fail to be adequately supported. It is not considered that the adoption of a scheme such as is outlined in the questionnaire would serve to promote the

war effort one iota. It is regarded as embodying proposals which are uneconomical and detrimental to the rights of all consumers. (From Proceedings of Council of Liverpool Chamber of Commerce July 28, 1941)

Whether the new spirit of watchfulness has appeared too late and whether such sporadic protests will prove an ineffective attempt to sweep out a tide of governmental encroachments which has already engulfed many a rich domain hitherto considered the exclusive



province of private enterprise, is a moot point. In the early months of the war, appeals to patriotism blinded business men to the stealthy manner in which state control was making each successful gain a sure footing from which to make further forays.

The legal background to these encroachments is supplied by the general powers of which Parliament divested itself, in favor of the Executive in the Emergency Powers (Defense) Act. This was passed to avoid the cumbersome processes of peacetime, where ministers would have to obtain the approval of the legislature for any innovations of procedure.

The Emergency Act was patterned after the Defense of the Realm Regulations of the Great War, Paragraph 1 of which specifically provided that: "ordinary avocations of life, and enjoyment of property will be interfered with as little as possible."

At the beginning of this war there was a similar benevolent attitude toward private trade and industry. Powers were exercised only when vitally necessary, and no attempt was made to interfere with management. For example, the Ministry of Supplies (roughly corresponding to O.P.M.) took over the control of vital raw materials, such as non-ferrous metals, iron and steel, timber, silk, industrial alcohol, etc. The prices of these were fixed and their do-

mestic use or their export made subject to licence. Other raw materials such as cotton, rubber or tin were left free. For the purchase or distribution of these raw materials whether controlled or not, at the start, the peace-time machinery of private trading was generally used.

### Replacing private business

SIMILARLY the Minister of Transport took control of the railroads, the existing personnel being left responsible for their operation. Financial arrangements assured the railways of profits which would not be less than the average for the previous three years. In the same way, while the Admiralty assumed control of the Merchant Fleet at the beginning of the war, it proceeded only to charter the ships it required, and did not, as it has done later, requisition the whole fleet, with the consequent disappearance of the functions of the shipbroker.

Very early in this war, however, in-

dividual governmental edicts began to appear. In themselves these seemed harmless, and were apparently drawn up to meet particular situations. For example, before the war was two weeks old, employers in certain industries were prevented from advertising for new workers. Such edicts were symptomatic of the Government's changed attitude toward business. In the previous war Government had only interfered when absolutely necessary.

The Government's invasion of the field of private enterprise really started when it began transforming itself into a general purchasing agent for raw materials. At first this was done when political considerations required it and the rights of private interests were, as far as possible, protected. Thus when foreign markets were cut off from the British colonies in West Africa, and the British Government decided to buy the whole coca crop, this was done through private shippers, who also were called in to market it after it had been bought. But the trend of the Government to replace the private trader as the purchaser of raw materials was also early in evidence. In November, 1939, the Government proceeded to buy Egyptian cotton in bulk lots from the Egyptian Government.

It left the purchase of American cotton in the hands of the private Liver-

(Continued on page 80)



The power to conscript labor has never been used but the power to blitz private enterprise has been used aplenty



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# The Tangled Web of Priorities

By LAWRENCE SULLIVAN

**A** BATTLESHIP is made of steel, copper, aluminum, lumber, lead—and priorities; and the greatest of these is priorities. The same is true of automobiles, bicycles, machine tools, vacuum sweepers, freight cars, refrigeration coils, drilling equipment and pipelines. Up to November 1, some 55 general priority schedules had been proclaimed as in full force and effect; but several of them already have buckled under what historians call the pressure of events. The remainder impose upon American business a new and strange malady of confusion and indecision—an affliction which makes strong production men whimper.

## More priorities than production

AT LAST count something like 731,000 priority ratings were out. And official Washington blushed when these certificates began coming in for redemption faster than the goods specified could be supplied. In October, for example, there were 6,000 tons more of defense allocations for copper than the total supply available, which left less than nothing—by government figures—for civilian requirements. S.P.A.B. explained that the month's supply was 138,000 tons, but priority certificates were issued for 144,000 tons. Total demand for the month, including all normal civilian requirements, were computed by the same authority at 259,000 tons.

In steel, an October survey disclosed that many mills were booked three months ahead on A-1-a priorities alone; and even on this prime rating deliveries were a matter of three to six months on several key items.

As this state of affairs developed over a period of about six months, small business lifted an anguished voice from approximately 4,000 cities and towns almost simultaneously. The reverberations brought forth a select committee of the Senate to study the problems of small business—especially priorities. Next, a new division was established in the Department of Justice to receive

● AS THE iron grip of defense controls squeezes normal production to a thinning trickle of civilian satisfactions, the cross purposes and maladjustments of official exactions become matters of national concern. From the beginning, the tangle of overlapping administrative powers has been apparent, though generally accepted in the name of emergency. Priorities, for example. Whenever the system has bogged down under its own weight, the Government has looked to expansion of its authority as the way to its objectives. Witness the new allocation plan announced on November 7 by the S.P.A.B., itself a recent creation intended to lift the fog over production.

Board's idea comprehends an end-products division in O.P.M. to approve all raw material required for specific industries. Military needs will come first. Supplies ear-marked for defense orders will be included in national pool from which all allotments are made. If this plan is substituted for earlier methods, and without the confusion of added new employees, some of the fog may be lifted, though not with any lessening of Washington influences on the course of business.

What the latest plan means in sum to management and workers is still speculative. What is now happening by reason of established controls is here suggestively indicated by Lawrence Sullivan, for 15 years a student and observer of the relations of business and government. How troubled the period ahead may be is ominously forecast in the vision of Donald M. Nelson, S.P.A.B. chief, "the toughest, hardest years . . . since Valley Forge."

the lamentations of small business. The select House Committee investigating labor migration soon held hearings on the new problem of "priorities unemployment," and a resolution was presented in the House Rules Committee to create a special investigating committee, endowed with \$50,000 of research funds, to find out, if possible, how 55 executive orders could possibly rub so many persons the wrong way.

Since July, thousands of letters and telegrams have poured in upon the House and Senate, the O.P.M., F.T.C., S.P.A.B. and the Department of Commerce. They tell a story of the prospective closing of something like 85,000 to 100,000 smaller manufacturing plants throughout the United States, with the consequent *disemployment* of approximately 3,000,000 workers by March, 1942!

On these basic figures all parties to the discussion agree. The American Federation of Labor reported, October 11:

A new government unemployment estimate shows 700,000 persons dropped from the country's pay rolls between August and September. While some of these layoffs may have occurred on farms where crops are short due to drought, it seems likely that a large portion of the 700,000 unemployed were laid off because of material shortages in consumer-goods industries, due to priorities. As many as 3,000,000 persons employed in consumer-goods industries, sales offices and services are threatened with layoff before January, 1942. Unless priority layoffs are checked, unemployment in December may be back to the level of April, 1940.

Reduced to a sentence, the story seems to be that we are producing defense so fast that we must shut down about 85,000 factories to keep going—



## How high is up?

People sometimes come to us and say something like this: "I make \$40 a week. How much life insurance should I own?"

We wish we could answer that question. But, frankly, it is a little like asking: "How high is up?" or "How long is a piece of string?" The only answer we know is: "It depends."

The amount of life insurance a man should own depends on a great many things. Each man's case is a strictly individual problem. For example: Is he married? How many children has he? How old are his children? Has he other dependents? Does he own a home? Is it mortgaged? What is his occupation? What are his other assets?

If a man is not married, he may not require so much protection as a man making the same income who is married and has four children. A man who owns a home may want to provide additional insurance to enable his widow to pay off a mortgage. These and a great many other considerations make it impossible to lay down any one rule or set forth statistics governing how much life insurance any particular man should own.

An average figure should never be taken as a guide in determining the insurance needs of any given individual. For instance, one man may find that a certain per cent of his income will buy the kind and amount of life insurance that he should own, under his circumstances. His neighbor, on the other hand, may find that this same per cent of income provides more than adequate protection.

That is why the question: "How much life insurance should I own?" can be answered intelligently only after a trained, experienced life insurance agent has made a conscientious study of each individual problem.

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and, at the same time, must build about \$3,000,000,000 worth of new plants in which to employ the 3,000,000 workers not needed in the civilian supply industries.

Of course it's not really as simple as that. Some factories are not closed down completely, but continue to operate at about one-fourth of capacity, which leaves managers wondering who will pay the electric bill next month. But if you can visualize 3,000,000 men and women unemployed because they have no raw materials with which to work, you have a practical, going picture of priorities today.

About two months ago, when the mail began to back up on the mimeographs at Leon Henderson's O.P.A.C.S., drastic measures were required. The whole administrative scheme of priorities was reorganized under S.P.A.B. With this new beginning, there came an emphasis on allocations, whereby essential materials were assigned in great chunks rather than by spoonfuls. But this experimental transition has been attempted only gradually, and there is still a long row to hoe before American industry really begins to hum at anything like maximum production. Meanwhile, the mortality among the smaller manufacturing plants still is alarming.

### Red tape makes idleness

ONE universal aspect of the problem is the matter of replacement parts for plant maintenance. When essential machinery breaks down, there is no time to wait for priorities. Yet the voluminous material before Congress shows that, in some instances, vital productive machinery has been idle as long as seven months, awaiting one relatively insignificant repair part.

The mechanical refrigeration industry offers a conspicuous example of this. The industry comprises about 250 primary manufacturers, some 300 jobbers, and approximately 25,000 dealers and retail service organizations. It serves grocers, butchers, restaurants, delicatessens, taverns, drug stores, dairies, meat packers, bakeries, cold-storage warehouses, chemical manufacturers and petroleum refineries. It maintains more than 12,000 compressor units in the Army alone, plus several thousand in the fleet.

The unhappy plight of this industry today is thus summarized for Congress by one of the primary manufacturers:

Think what would happen to this nation were mechanical refrigeration equipment permitted to become inoperable through lack of replacement parts! Yet, today, no provision exists whereby the butcher, grocer or druggist may obtain the necessary repair parts to keep his equipment in operation for the preservation of foodstuffs and other perishable stocks. Some measure of relief is available to wholesalers and manufacturing plants through O.P.M.'s Preference Rating Order P-22, which enables such plants to order repair parts.

This order, however, has been extremely ineffective. When a breakdown occurs, the manufacturer or wholesaler places an order with an A-10 priority rating, which he presents to the refrigeration service man, contractor or jobber. This, in turn, is passed along to the manufacturer of the valve, condenser, or belt. Then, and then only, is the manufacturer permitted to order the needed raw materials from his own source of supply.

In practical operation, the transmission of the order from the service agency through the jobber to the manufacturer would require a minimum of four days, usually longer. Then the manufacturer orders his metal. With good luck he will have it in ten days or two weeks. Four days more will be required to fabricate the part and ship it. At best, 20 days have elapsed—a long time for a refrigerating plant to be out of service.

But even this schedule assumes that the whole process clicks instantaneously all along the line. If a bobble occurs, the refrigeration plant will be out of service at least a month. On occasion, these dislocations have been caused by a repair part costing only 25 cents to \$1.00 when finally delivered—a piece of copper tubing, a small coil, a simple valve.

Manufacturing such parts one at a time as the priorities are cleared increases costs tremendously. In the words of the refrigeration manufacturer:

To produce valves economically, we must order these materials in quantities of 5,000 to 25,000. But under Order P-22, when a large plant is in dire need of a valve, or some other replacement part, the manufacturer is permitted to order raw materials only for that one valve. Perhaps it might effect delivery in six or eight months at a cost 100 times the normal cost. But, of course, perishables cannot wait that long for the restoration of refrigeration.

The refrigeration industry proposes as a solution, that the primary manufacturers be allocated a reasonable amount of all essential metals, so that adequate maintenance inventories of all parts may be carried.

"It is as important to preserve foods in the retail stores as in the larger plants, because the amount of food on hand in our hundreds-of-thousands of retail stores represents a very large percentage of the total available food supply."

Excessive stocks held by government agencies also are a part of the picture as seen by the refrigeration industry:

We believe that the present practice of our Government of hoarding huge quantities of material which may be required during the next five or ten years should be discontinued. We realize that the Army and Navy must be assured of necessary materials for the armament program planned for the next several years, but a large amount of this material should be taken from future production. A scheduled portion of each year's production should be sufficient reserve, rather than to take excessive quantities away from civilian requirements at this time, when some of

those materials will not actually be needed for defense work until 1944 or 1945.

Materials not immediately required in defense plants should be made available to small manufacturers on a controlled basis to preserve the identity and stability of tens of thousands of small business enterprises. This will prevent serious unemployment and make available to manufacturing plants, retail stores, and homes the minimum quotas needed to keep the nation going.

We appeal to you, our representatives, for help! Through proper legislation and control over the ever-increasing government bureaucracies, a national calamity may be averted. We pledge you our loyal support in this important effort.

The plea of this industry is typical. Its problems are identical with those encountered in sewing machines, floor polishers, paint, garden sprays, or gas stoves.

### Repairs small but essential

REFRIGERATION experts estimate that commercial and domestic plants throughout the country represent an investment of about \$5,000,000,000; air-conditioning, an additional \$400,000,000. This entire plant can be maintained, they say, with about \$1 in parts annually for every \$1,000 of investment. In other words, the allocation of only \$5,400,000 worth of essential materials would put this industry on a stable emergency basis. Yet, if this allocation is not made, and some practical method adopted to assure repair parts, the nation's entire system of refrigeration and air-conditioning may fall into breakdown within two years.

Failure of mechanical refrigeration could lead to epidemics, widespread illness, or general malnutrition. . . . In England, new refrigeration equipment has a high priority rating. It has been proved that refrigeration maintains the vitamin content of foodstuffs at a high level, thus keeping defense workers at top efficiency. . . . Serums and pharmaceutical products also require efficient refrigeration for hospitals and military field stations. . . . Nearly 500,000 workers and their families depend in some way on the refrigeration and air-conditioning industry. Probably less than half of these are skilled workmen who might easily find jobs in defense industries.

Makers of agricultural machinery likewise face a difficult problem. The Government has undertaken, through the lend-lease program, to supply food for 10,000,000 people in Great Britain. The Department of Agriculture has asked for increased production of every major crop, save wheat, cotton and tobacco. This increased production calls for more farm machinery, doubly urgent because of the growing shortage of farm labor. Nevertheless, priorities have curtailed drastically the output of new farm equipment, even repair parts. In the language of one important manufacturer:

We have an A-10 priority on repairs and a B-1 on new equipment. Most of you men  
(Continued on page 86)



# The Boss admitted his conscience hurt him!

- "You know how Bosses are!
- "Mine tries to act pretty hard-boiled — but the other day he broke down and admitted his conscience hurt him, for loading so much figure work on me. Said I'd done a wonderful job, and all.
- "And then my conscience hurt *me* — because I didn't tell him that with that new Model M Comptometer, it wasn't any trick at all to turn out all that extra work in record time! I didn't explain how the Comptometer's exclusive Controlled-Key safeguard eliminates operating errors, and how the no-glare answer dials, and the elimination of answer-dial zeros that aren't part of the actual answer, make correct answer-reading easier and faster! In fact, I didn't tell him about *any* of the Comptometer's exclusive advantages!
- "I figure I might as well take the credit now — because he'll find out soon enough that the Comptometer handles *more figure work in less time at lower cost!*"



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# As Business Sees the Labor Issue

By ALBERT W. HAWKES

**R**EPRESENTING an underlying membership of 750,000 business men, the Chamber of Commerce of the United States, in formal declaration, last May said:

The public interest is so paramount in the defense emergency that employers and employees are under corresponding obligations to arrive at adjustments of employment controversies without any impairment of production. When themselves unable to reach adjustments, they should utilize the services of state and federal agencies for conciliation and, if there are still differences, should have a right to have the aid of the Defense Mediation Board.

That anyone should for selfish purposes take advantage of the public need for production, and use threats of interruption for purposes of coercion, is intolerable. Such acts are offenses against the public safety, and offenders should be subjected to the penalties of the laws they violate. Any persons who fail to recognize their public responsibilities should be subjected to the full force of the opinion of those they purport to represent and of the public.

The Chamber, therefore, affirmatively proposes that all its member organizations, and forward-looking and patriotic labor and industrial leaders throughout the country, should immediately work out a program whereby a moratorium is declared against any disputes which will interrupt the free flow of materials to defense plants or the manufacture of all elements required for complete national defense, whether by way of amendments to existing labor agreements or otherwise. The public interest calls for a voluntary and wholehearted acceptance of the principles of amicable and prompt adjustments of any such disputes so that there may not be any impairment of the production which the public interest so urgently requires. If there be failure in any important direction in adherence to this plan, the alternative will be either national helplessness or the enactment of restrictive legislation with limitations on individual rights which might be harmful to all.

The Chamber recognizes that the safety and welfare of our citizens depend upon full speed ahead in the production of those things required for national defense. It further realizes that to accomplish this end, we must have unity and a willingness by all to make sacrifices.

Such unity of purpose and action involves not only manage-



ment and labor, but all American citizens. We hold that the right to work or to refuse to work is one of our great freedoms, to preserve which the nation is arming itself. Governments—local, state and federal—have a first duty and responsibility to protect the citizens in this right to work—while at work—on their way to and from work—in their homes

and in all ordinary legal pursuits of their private life.

We believe in the right of an individual to refuse to work and the right of a group to strike. But under our present national emergency, we deplore any such action based upon an unreasonable demand or a debatable cause.

No right guaranteed to the individual under our Constitution is more sacred and fundamentally important than the right of the individual to work

and earn a living. This right exists whether he belongs to a union or does not belong to a union. It is a *fifth freedom*, quite as important as any of the freedoms, including the four freedoms of worship, speech, the press and assembly.

We firmly hold that if our established form of government is to endure, it must not permit or assist any group of its citizens to force others to surrender their guaranteed rights and freedoms.

We would be derelict in our public duty if we did not point out the danger inherent in the recent policy of public officials in bringing pressure upon directors and stockholders to remove anyone in management as the price of subduing labor violence.

We believe any government official who uses the power of his office to urge the owners of private business to remove anyone in the management of their business because of his or her inability to settle a difference or grievance

that may exist between employer and employee or rival groups of employees is violating a fundamental principle which underlies the free enterprise system and our American way of life. If violence is subdued by the action of governmental officials in turning the situation over to those who are threatening or causing the violence, then government has ceased to function properly, and the continuance of our American way of life is in grave danger.

I hold that the closed shop issue transgresses the rights of our individual citizens as guaranteed by the Constitution of the United States and that it is monopolistic in every sense of the word.

I contend now, as I have contended for a number of years, that

(Cont'd on page 79)

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**W**E ARE reminded on every hand that our greatest need is national unity. The principal element of disunity has been the fear that the Administration was unwilling to check abuses by labor union leaders in forcing men to join a union at the price of their right to work. President Roosevelt does much to remove this fear and to contribute to national unity when he says, on November 14:

"I tell you frankly that the Government of the United States will not order, nor will Congress pass legislation ordering a so-called closed shop."

And his position is most timely because the forecast of astute Washington observers was: "The real defense crisis is not now. It is ahead. The issue is the closed shop, or the equivalent, union maintenance."

If, unfortunately, there is a further disruption in the labor field, the President has already been assured of the position of organized business, the interpretation of which is set forth herewith.—The Editor.

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*"He who gains time  
gains everything"*

... DISRAELI

# *Addressograph-Multigraph Methods*

**GAIN NEW PRODUCTION TIME BY SAVING  
BRAIN HOURS AND HAND HOURS**

Time drives ahead—pacing production and every related activity. Results must be geared to the speed of the hours or they will lag behind. Much depends on the effectiveness of the methods used to control and co-ordinate every operation.

To simplify and co-ordinate the handling of rec-

ords and procedures that control production are functions of Addressograph-Multigraph methods. Wherever these methods are used, *brain hours and hand hours are saved. Mistakes and waste are avoided. The productive capacity of employees is increased—their work made easier.*

**TO USERS OF OUR PRODUCTS:** The services of our Methods Department are available to assist you in extending the use of your present equipment. All users of Addressograph-Multigraph products who are interested in receiving methods information are invited to write us. You are entitled to this service, for which there is no charge.

**ADDRESSOGRAPH-MULTIGRAPH CORPORATION • Cleveland, Ohio**

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**SHOULDER TO SHOULDER WITH YOU IN AMERICA'S DEFENSE**







# *really a merchant in mileage*

AS the national defense program progresses the importance of the automobile dealer to his local community is becoming increasingly apparent.

With his new-car activity cut by production curtailment, the contribution he makes through his used-car and service departments now stands out in clearer relief.

Statistics reveal that only about 26% of all the cars now in service were bought fresh from the factory by their present owners.

All the rest were purchased as used cars—which means that, at some point in their careers, nearly all were taken in trade by an automobile dealer, expertly reconditioned, and made ready to serve out their full usefulness in the hands of second, third and sometimes even fourth owners.

In this way millions of people who could not

otherwise afford to buy have been supplied with economical transportation.

Workmen have been able to find pleasant homes remote from factory districts. Industry has been able to provide jobs for employees from wide areas, beyond the limits of the immediate neighborhood or town.

And this happens because your automobile dealer is not simply a retailer of steel, iron, glass and rubber in the physical shape of an automobile.

He is a merchant in mileage, selling transportation in a wide range and at all prices—then keeping it usable through service that keeps cars efficient, economical and safe.

A partner through service with the whole community, your GM dealer is doing a job that today is more important than ever, as a motorized nation relies on its cars to get to work.

**GENERAL MOTORS**

**GENERAL MOTORS DEALERS**

*Partners  
in*  
**PROGRESS**  
*through*  
**SERVICE**

CHEVROLET • PONTIAC • OLDSMOBILE  
BUICK • CADILLAC





**ARCHIBALD MACLEISH, poet-librarian who believes democracy cannot be piled up in goods or gold, undertakes to make Government's myriad press agents sing together**

**T**HE REAL need has come to be, Administration circles admit, not more speeches or press releases from Government agencies and spokesmen but a harmony of tune. In addition to the multiple "information services" costing \$20,000,000 a year which the Government already had, some 1,400 newspapermen and publicists have now been added—at a cost of another \$10,000,000 annually—to deal with the defense program.

The Army set-up has been increased to 259 persons under Brig. Gen. A. D.

Surles; the Navy's to 211, under Lieut. Comm. R. W. Berry.

Similarly, the Treasury has added to its staff to publicize defense bonds and to make the increased taxes more palatable; the State Department has taken on more publicists. The Selective Service Board has publicity specialists. Robert W. Horton, former Scripps-Howard newspaperman, commands an army of 220 to deal with the work of the O.P.M. and Leon Henderson's O.P.A. and his C.S.—problems of consumer supplies, production, priorities,

# Harmony in U. S. Handouts

By **CARLISLE BARGERON**

price controls, labor, little business, shortage of materials and so on.

Secretary Ickes and his publicity staff come into the defense picture in the former's capacity as fuel administrator; the Department of Agriculture figures in it. In fact, publicity experts of practically every Washington agency consider themselves a part of the defense set-up. More or less, they are.

Because of this cacophony of voices, the general public, instead of moving, united, against the enemy, is wondering what it is expected to do. Earlier in the year, Secretary of Agriculture Claude Wickard announced an impending food shortage at a time when Congress was appropriating about \$1,000,000,000 in benefits involving crop reductions. The same night Leon Henderson made a speech describing a serious shortage of aluminum, Mayor LaGuardia announced that the campaign to collect pots and pans was simply to test the sacrificial spirit of the people.

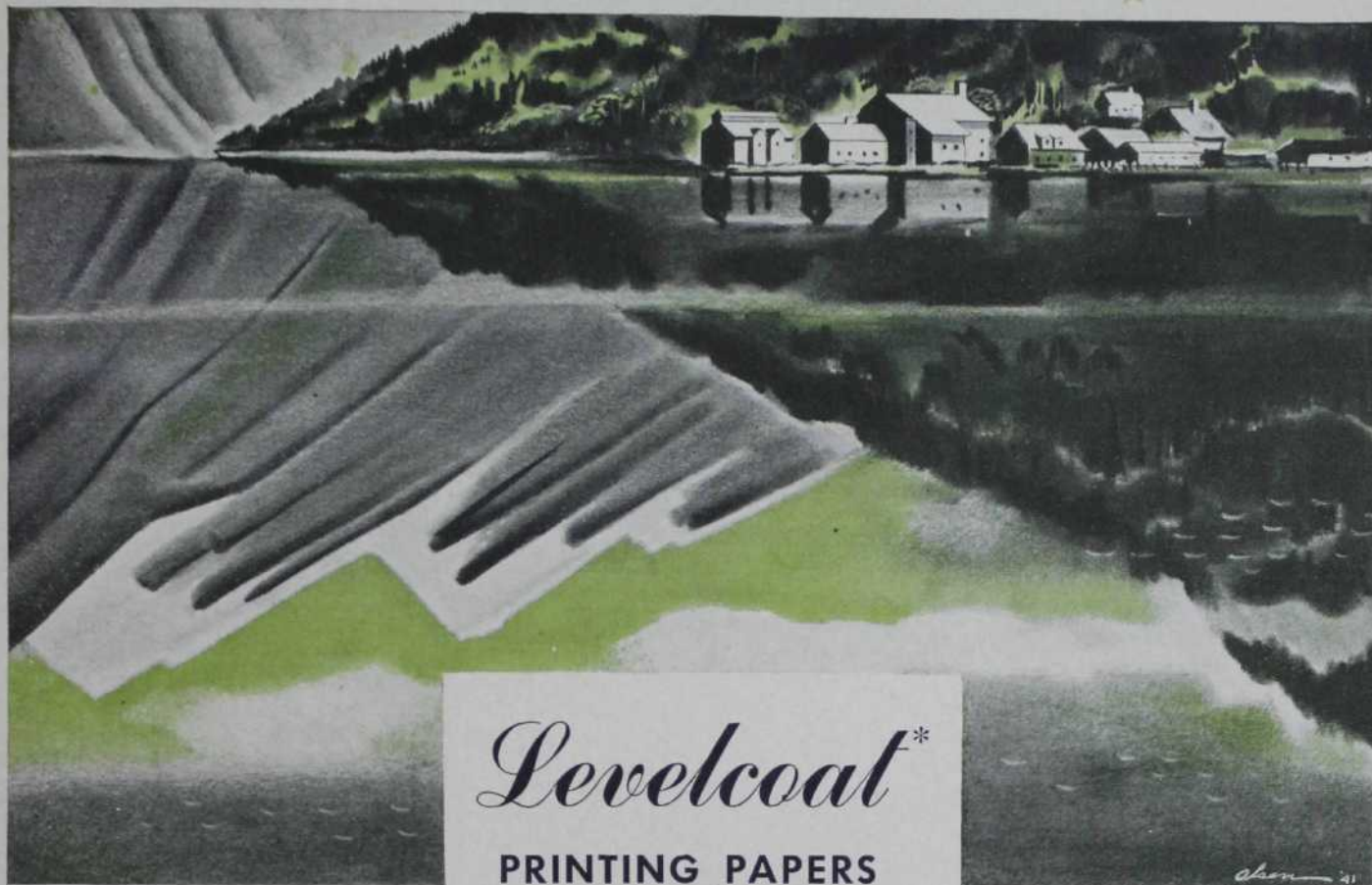
Secretary of Labor Perkins has periodically enthused over the employment boom which defense was providing. Meanwhile Mr. Henderson, the O.P.M. and the W.P.A. have been estimating how many men the impact of priorities will throw out of work.

On one occasion the Maritime Commission announced that supplies to Russia were to be shipped from Boston to Archangel and the route to Vladivostok dropped. This embarrassed the State Department because it indicated it was backtracking in its negotiations with Japan.

Military intelligence officials once waited on Mr. Horton to find out where his office was getting information on plane output which the Army was keeping secret and Horton's office was making public. It developed the information was coming from public statements by the President and Secretary of the Navy. On the same night that William



★ "SMOOTH AS STILL WATER" ★



## Levelcoat\*

### PRINTING PAPERS

Give all the beauty of costly printing papers . . . at the price of ordinary paper!

ALMOST overnight, *Levelcoat*\* printing papers won coast-to-coast popularity! No mystery is the ready acceptance of *Levelcoat* printing papers: they bring a combination of qualities never before found in any other papers. Manufactured by new and exclusive processes, *Levelcoat's* uniformly smooth-coated surfaces inject snap and contrast into halftones . . . make colors come to life . . . give type a sharp, clearly-defined appearance.

Most remarkable of all is the fact that *Levelcoat* papers combine all the beauty of costly papers at the price of ordinary paper! Hundreds of buyers of printed pieces who had been paying premium prices for finer printing results are now making worthwhile savings, without sacrificing quality, by specifying *Levelcoat* papers.

If a small printing budget has limited you to run-of-mine-appearing catalogs, circulars and brochures, you can now step up to *Levelcoat* quality paper at little, if any, extra cost—and have more "selling punch" in your printed advertising.

Seeing is believing . . . Ask your printer or paper merchant for *Levelcoat* samples. Or for proofs of fine printed results, write direct to Kimberly-Clark. You'll agree, these new-type papers do most for the money! They are available through your paper merchant. If you prefer, inquire direct.

**KIMBERLY-CLARK CORP.**  
NEENAH, WISCONSIN

Established 1872

NEW YORK: 122 East 42nd Street  
CHICAGO: 8 South Michigan Ave.  
LOS ANGELES: 510 West 6th Street

### Trufect\*

*Levelcoat Paper*

Made super-smooth by new, exclusive coating processes. For high-quality printing.

### Kimfect\*

*Levelcoat Paper*

Companion to Trufect at lower cost. For use where quality remains a factor, but less exacting printing results demanded.

### Multifect\*

*Levelcoat Paper*

Where economy counts in volume printing, this grade does a splendid job.

\*TRADE MARK



S. Knudsen, co-director of O.P.M., told the radio audience that a certain percentage of industry was engaged in defense output, Stacy May, chief of the O.P.M.'s Bureau of Research, gave the same audience a percentage half as large.

The various agencies never seem to be able to get together on the extent of shortages in essential defense materials, or what constitutes shortages. No two groups agree as to the size of the country's undertaking and each group discusses "shortages" in terms of what it considers the size of the undertaking.

In the play for publicity, the O.P.M. has frequently announced that it has certified proposed plant expansions to Secretary Jones, who has to arrange the financing. When subsequent inquiries reveal no definite steps towards the actual erection of the plants, Jones feels that he has simply been the victim of "buck passing." These so-called clashes get into print and give a picture of anything but unity in Washington when unity is being called for in the country. Secretary Ickes apparently had this sort of confusion in mind when he went off with the President on the latter's Caribbean trip shortly after the 1940 election. At that time the Secretary insisted that what the country needed was a campaign to make it "war conscious." The President agreed and, to Mr. Ickes' chagrin, asked Vice President Henry A. Wallace to draw up a plan. Mr. Wallace did, assuming that he was to carry it out.

Since then much water has flowed over the dam. The Wallace plan aroused the resentment of Lowell Mellett, director of the Office of Government Reports, who considered that making the country war conscious was properly his job. Thereupon the Wallace plan was turned over to him to be amplified and executed.

In the meantime, representative editors gathering in Washington for their spring convention focussed their attention on Mr. Mellett, who was reputed to be the country's impending censorship chief.

This so soured Mr. Mellett upon the terms "censorship" and "propaganda" that he did nothing about the Wallace plan, and apparently nothing to make the country "war conscious."

Impatient over Mr. Mellett's inaction, Secretary Ickes launched his oil shortage campaign which his chief press representative, Michael Strauss, now admits had making the country "war conscious" as at least one of its purposes.

Fiorello LaGuardia, mayor of New York, also pressed the President for permission to make the country "war conscious." Eventually he was authorized to set up the Office of Civilian Defense with a \$900,000 appropriation. Originally, this program envisaged test

evacuations, black-outs and millions of dollars' worth of new fire equipment.

A few black-outs worked disappointingly, the mayor got tied up in his campaign for reelection, and nothing much has been accomplished toward test evacuations or additional fire equipment, although citizens in many places are acting as fire wardens and women are doing their bit.

To this picture was added several weeks ago the new office, Coordinator of Information, headed up by Col. William J. Donovan, world war hero and first assistant attorney general in the Coolidge regime. Washington newspapermen, somewhat bewildered by the accumulating agencies, pounced upon it as "the" overall propaganda agency, the counterpart of the George Creel propaganda enterprise in the First World War. Under the executive order creating it, this could easily have been such an agency. A staff of some 200 geographers, economists, historians and newspapermen was hired. Then, after a few weeks, it developed that Colonel Donovan was just supposed to work out an interesting job for this staff without stepping on the toes of any other agency.

Forthwith he stepped on the toes of the agency of Nelson Rockefeller which, along with the State Department and some 20 others, is supposed to develop "cultural relations" with Latin America. After a few weeks, indeed, his operations were restricted to Europe and the Far East.

At this juncture still another agency, Office of Facts and Figures, was set up.

The order creating it says:

Subject to such policies and directions as the President may from time to time prescribe, the Office of Facts and Figures shall formulate programs designed to facilitate a widespread and accurate understanding of the status and progress of the national defense effort and of the defense policies and activities of the Government; and advise with the several departments and agencies of the Government concerning the dissemination of such defense information. The Office of Facts and Figures shall rely upon the services and facilities of existing agencies of the Government for the dissemination of information.

This then, Washington observers agreed, was the overall and coordinating Government propaganda agency for World War No. 2.

Archibald MacLeish, the poet-librarian of the Library of Congress, was made director. In a statement, he said:

The Office of Facts and Figures is established, as I understand it, upon the assumption that the people of a self-governing country are entitled to the fullest possible statement of the facts and the figures bearing upon conditions with which their Government is faced.

Mr. MacLeish, setting about to build a staff of 25 or so, winced at the term "propaganda" and deprecated any comparison of his agency with the Creel set-up. Also, he hastened to explain, any

success he might attain at coordinating the many Administration tongues would depend wholly upon the confidence which the other agencies placed in him.

### A clearing house for speakers

THIS is the general picture into which Mr. MacLeish and his new agency are supposed to fit. The office is to serve as a clearing house where Washington's babbling tongues may be made to babble the same things. The many conflicting temperaments concerned make it a tremendous job and Mr. MacLeish is cautious in discussing it. He has entrance to the President and he is backed by Justice Frankfurter. That helps. He frequently assists the President with his speeches. With the playwright, Robert E. Sherwood, he is responsible for most of the ringing, call-to-arms phrases—such as that about the American people having taken up their battle stations—which have characterized the President's recent speeches. Such expressions come within the realm of poetic imagination rather than actual description of what has happened. Aristotle said the historian dealt with facts, past and present, while the poet let his imagination roam over the future.

Mr. MacLeish, however, has been at odds with this interpretation of the poet's job. He insists that the poet has a job to do on the "present." He is typical of the intellectuals who have become so prominent in the affairs of men in the past eight years and who believe deeply in the freedom of words but are less concerned about the freedom of other enterprises—production and sale of goods, for example. While trying to synchronize the messages of the countless other voices in Washington, he hopes that his new job will give increased strength to his own message. As given in his recent booklet, "The American Cause," now circulating at one dollar a copy, that message is:

Democracy itself has never been and is not now and never can become a way of trade, a world of goods, a heap of products, whether those products are of gold or steel or corn or silk or whatnot: Whether the trade is large or small or free or planned or neither.

This, he contends, is what the Fascists would have us believe Democracy is. But Democracy is something inside a man, a dignity, a confidence in himself and a confidence in his fellow man. He has written:

If Democracy is what the Fascists say it is, nothing but the world of innumerable automobiles and the best telephone system on earth and a new gadget just around the corner and the radio's droning in the hotel lobbies 18 hours out of 24 and the simpering legs in the magazine advertisements and the simpering voices on the movie screen and the hundreds of thou-

(Continued on page 78)



**THERE** will be a complete blackout of many items, but the women folks are expecting their men folk to provide satisfactory replacements for what Uncle Sam has taken away

**WE** ARE not going to sleep on a pallet, go back to cooking in an iron pot hanging in the fireplace, nor set our dishes to cool on the window-sill, even if some of the Auntie Dolefuls would have us believe that curtailment of civilian "hard goods" means just that. If Mr. and Mrs. Public start right now taking stock of the buying situation as it is and govern themselves accordingly, they're going to get along all right.

So are most of the manufacturers and retailers. With thousands of persons jingling money in their pockets and boasting of job security such as they haven't had in years, there is more room than ever for the go-getters to go get consumer business. The adjustable fellows will get along as they always have—provided they hurry up and exercise some of the American ingenuity and adaptability which figured out ways to sell oil—and the lamps—to China while thinking up fluorescent lighting for America.

Hopeful signs are in the offing already. Your neighbor, the fire-fighting fan, will probably miss the bell on the engine, but an ordinary siren will be luring him on just the same. The fireman who reaches for his suspenders and garters probably won't find the fasteners made of plated brass, but he won't care as long as the new plastic ones hold out. The hose nozzle maker may have been prioritized out of certain brasses and bronzes—but he's molding those intricate atomizer tips out of cellulose acetate—and saving money on the job.

This doesn't mean that the whole consumer buying situation is rosy. Billions of dollars have been spent for defense this year, and next year we'll probably spend twice as much. Curtailments in civilian goods production such as the 43 per cent cut in refrigerator output are typical of the impact of gun economy on butter. Prices are up and going higher. If the little fellow's salary isn't raised he'll certainly feel it next spring when his wife's Easter suit costs \$40 instead of the \$30 he paid last year. If he manages to keep the price of his own suit down to \$30



Will she accept cotton substitutes at a higher cost?

## Housewives Join the Hunt for Substitutes

By JULIETTA K. ARTHUR

by buying lighter weight worsted goods he's likely to find the same outfit will cost him \$45 by the fall of 1942.

Meanwhile, inventories of everything are high, and retailers continue to stock up—when they can get the goods—on the strength of sales which were 17 per cent better this year than last (as of Oct. 26).

It's true a large section of our 130,000,000 hasn't yet begun to feel the change in our domestic set-up. The bookkeeper who has been shrugging his shoulders when he reads "there's a

shortage of machine tools and reserve supply of metals" will get a jolt when he tries to buy copper screenings next spring for his week-end shack. If he's thinking of spending his Christmas bonus next June on new awnings, or stream-lined chairs and tables, or a soundless glider, he'd better hang on to the old porch rockers and blinds instead—and take note that hickory, reed, and rattan furniture is due for a fresh wave of popularity. Anything and everything containing metals, fiber and chemicals may join the Army or Navy



at any moment. Some of it already has.

A lot of duck and canvas originally destined for verandas is going into tents and truck covers; the Navy's battle-wagons and the Army's field kitchens have a claim on the steel meant for castings and blades in our lawnmowers, copper for our lamps and brass for their sockets. The big manufacturers in the metal furniture field say there'll be enough steel for production on their 1942 lines up to 50 per cent of the previous season's output. That is still a lot of merchandise, but the picture may be considerably changed by spring.

### Styles in a war economy

AS FOR the housewife who has been zipping up her gingham aprons and her dresses with slide fasteners, she may have to use old-fashioned cloth loops and wooden buttons next year.

The fact that one of the most important New York style shows this fall featured a costume which had a loose zipperless, buttonless, beltless coat without fasteners indicates that forehanded designers in America have learned how to make war economy serve their purpose.

However, slide fasteners got a suspension of the death sentence last October when O.P.M. allotted the in-

dustrial 70 per cent of its 1940 copper quota. That made the corset and brassiere manufacturers breathe easier. But milady had still better look to her 1942 fastenings. In October a special committee appointed by the manufacturers sat down soberly to consider how far apart they could put spacings on hook and eye tapes and still stay in the market with Mrs. America.

Government orders are making buttonhole machines and snap fasteners using metal alloys almost unobtainable. With brass and nickel and wire restrictions making the future supply of hooks and eyes and hose supporters anybody's guess—not to speak of the threat to steel boning without which the corset makers would be in a serious plight—the corset industry (thus far rated in the essential category by Washington) has had the jitters.

Government orders for wire are making inroads into the housewife's hairpin supply, too. She can still buy bobby pins in the ten cent store, but the card which used to hold 36 little items, now has only 30. That's not the only change she'll notice in her ten to 25 cent purchases this Christmas.

For the first time in their history, the Woolworth stores are listing six cent items. So are their competitors. Colored glassware has become one of the first tableware casualties of pres-

ent conditions, with increasing difficulty in obtaining certain chemicals. Eight-color highball glasses, for instance, will be more scarce.

As for the chemicals, when such articles as paper doilies and shelvings are marked up one cent in the ten cent stores, when the corner cleaner tacks on ten cents to his price per garment, you won't have much difficulty explaining to your wife why chlorine shortages are giving laundrymen "washboard blues" and the paper industry a headache.

### Inconvenience for the shoppers

CHRISTMAS is going to do a lot of other things to educate the buying public. For instance, that paper shortage is going to be dramatized. It's one thing to read that boxboard manufacturers supplying kraft paper, corrugated boxes and bending board to the Government have a 6,000,000 ton supply gap they'll find it hard to fill for civilians. It's another to receive a Christmas present in a paper box which carries this slogan:

For Defense—Save and Sell this Empty Carton.

Or when your wife does her pre-Christmas shopping her pet department store is likely to say:

Sorry, Madam; we're not delivering small packages any more; the "take-with" policy requires less wrapping paper, or We regret, Madam, we can no longer offer you a free gift-wrapping service.

These are just a couple of the recommendations of the National Retail Dry Goods Association this Christmas season. Some of the 5,700 store members have already found the paid gift-wrapping system a good way to curtail customer demand for elaborate, expensive and hard-to-get papers.

But exactly how the housewife is going to react in the next 12 months to all these changes can best be judged by the part she's playing in the hosiery shake-up which is having a major test this holiday time.

To the average woman in the United States silky-looking hose that show off her legs to the best advantage are a basic necessity.

Tell her there may not be enough tin to go around the canning plants, and

(Continued on page 74)

The badge of patriotism may yet come to be last year's hat or worn out shoes although there is no shortage in either at present





EVERY EXTRA LEAF IN THE TABLE  
**AND FAR**  
**TOO MANY GUESTS**  
 FOR CHRISTMAS DINNER!



**That's the situation your telephone company faces every Christmas. That's why there may be delays on some Long Distance Christmas calls.**

• Last Christmas Eve and Day the wires were jammed. The switchboards were manned by regular and extra operators working all through the holiday. Long Distance telephone calls were three, five and at some places eight times normal.

We're glad so many folks want to exchange friendly greetings across the miles at Christmas — but sorry that, because of it, we can't supply service as good as usual.

We expect the biggest rush of calls we've ever had this coming Christmas. We'll do our best to prepare for it. But some calls will be slow. Some may not be completed. For these, we ask your patience and understanding. . . . *Thank you, and Merry Christmas!*

**BELL TELEPHONE SYSTEM**







BUCHER FROM NESMITH

"... apprehending what we do not understand"

## Disunity Through False Bogeys

IT IS HUMAN instinct to fear the unknown. Starting in youth when a childish imagination peoples dark halls with unknown terrors, we continue through life viewing with apprehension what we do not fully understand.

Cunning men seize on this natural apprehension to advance their own purposes. Persistently pointing out dangers which they perceive or conveniently manufacture, they lift themselves up as the champions who will protect the people from these monsters.

Recently this has happened with amazing regularity. Hitler rose with a promise to free Germans from the domination of "international Jews." Stalin fights against "capitalism."

In our own country we have seen too much of fears and hatreds evoked among the people to advance the selfish motives of the few. Men, groups of men, special cliques, have risen to prominence and power on the backs of such

nebulous monsters which, calm examination reveals, are merely men and women making a living by providing other men and women with desirable services.

Regrettably calm examination is not so natural an instinct as is fear. People warned by those whom they should be able to trust that imminent danger lurks in a nearby dark corner act first in self-preservation. Ignorance can hate. Only understanding can love.

Now, because this technique has been widely followed, we are torn by unnatural enmities when only unity can save us. And yet those who plead for unity do little to tear down the bogeys they have created.

So long as this sort of disunion is permitted, higher taxes, bigger guns, faster airplanes, cannot give us national defense. Only as it is eliminated can the future hold for us the kind of advance and advantages we have had in the past.



# The Game We Play Badly

**T**O THE OUTLANDER, America has been for a hundred years or more a place where it is fun to live and fun to work.

Up to the time we shut the gates to unrestricted immigration in the 'twenties, they came by the millions from every country in the world to find with us a place where life was not so hard, where all one needed for a start was an eager spirit and a pair of willing hands.

Here was a country where even work was called a game. Men described their occupations as the selling, the banking, the real estate "game."

That attitude begot a spirit of competition, a determination to excel, a willingness to experiment, test, devise and discard which made the products of America's business "game" the marvel and despair of all the world.

Out of the nation's laboratories and factories poured billions of dollars in autos, radios, locomotives, typewriters—an Aladdin's lamp of conveniences, luxuries, labor-saving devices

to make living itself a game instead of a chore.

One game we have badly played—the Great Game of Politics as Frank Kent has called it. In every field save that of Government we accept the fact that experience is an asset. We do not expect a sports writer to play center field, like a DiMaggio. We do not look for the weekend business golfer to win the National Open. We do not expect the parents Dionne to syndicate a column on Child Training and Hygiene.

Yet we are willing to take control of business away from business men and turn it over to professors and administrative bureaucrats who never put up the white alley of their jobs for the electorate to shoot at.

Any small boy knows this is silly. He knows that, with intelligent observation and experience, he knows more about football or baseball or checkers than those who found their learning in books written by other men. Let's hope he also knows it about government. His daddy seems to have forgotten.

**"fun to live and work . . ."**

MC MANIGAL







# Washington



and  
Your Business



## "More Haste, Less Speed?"

OTHER people had been chattering about it, but Donald Nelson's was the first authoritative voice to say:

We're going to try to finish up this thing in two years.

Nelson is the executive head of S.P.A.B., of which Vice President Wallace is the front man. If Nelson makes a go of it, Wallace will be prettily built up as the presidential inheritor in 1944. If he fails he will get a "Dear Don" letter and a ticket to the fields. Meanwhile the two-year-program is frightening some very sound people in Washington. They do not question that an enormous production of war materials can be achieved if the federal Government uses its force and authority to channel manufacturing capacity for war. They fear that some of the underlings in whose hands money and power have been dumped without stint are showing a disposition to be ruthless. Washington knows that it is the underling who does things in the Government. The underling has much to gain and not much to lose. He never worries about the other fellow's broken china.

## What Two Years Might Do

IN the Interstate Commerce Commission one worry is what might happen to the railroads. If the two-year-plan—that's the way it is being described—is forced into topspeed, the railroads will be overburdened. If the war program were expanded along business lines they would not be. The freight haul would be adjusted to car and storage capacity and manufacturing needs. John J. Pelley of the Association of American Railroads can tell of that. But freight congestion can be produced overnight if underlings from the outside try to run their part of the machine faster than the schedule permits. If the roads are asked to handle more than they are geared for they will need more repairs. But the steel for such repairs has already been quotaed for other

uses. If the railroads begin to break down and are unable to make repairs there may come a call for government operation. Not a loud call, perhaps. The I.C.C. thinks the people still remember the last time government tried to run a machine it knew nothing about. But if there is a breakdown in service, due to an unbalanced program and a lack of repairs, there will be a demand for government ownership. Some on the I.C.C. think so, anyhow. They are afraid of the two-year-plan.

## That Isn't All Of It

THE steel industry says it can produce with the present facilities all the steel that can be freighted and used. The two-year-plan would consume more than present facilities can produce. To make the two-year-plan work, the two-year-planners are trying to force through a 10,000,000 ton expansion in steel production. That would not merely throw a monkey wrench into the defense program. It would throw an anvil and sledge. Industries now using steel for defense would be starved, railroads would be forced to lose steel for repairs, new steel works would require millions of tons, and the two-year-plan would look like a jalopy after it hit a Diesel locomotive. But the two-year-planners are under full steam.

## May Be Underling Nonsense

THE two-year-planners—and it is to be remembered that some of them are only underlings—say the small manufacturer will be given contracts if he can handle them, but that his interests will not be considered if he cannot keep the pace:

"Speed," they say, "speed is the thing. If the little man can't hold the rails he must give way to the big man."

Business men visiting Washington say they are appalled at the foot-looseness which prevails. Every one running. Myriads of hundred-yard dashes.

## What of the End-Pattern?

THOUSANDS of little business men will be smashed because they cannot get plows and tractors to sell to farmers; or tomatoes at a price the housewife can afford; or paint with which to keep houses from decay. None of this is news, but the two-year-plan is news. It may be that, if goods and food enough to satisfy the needs of Britain and Russia are not produced in two years, Hitler will win. That alternative is distressing.

## Hark from the Tombs!

MEANWHILE it does not seem likely that the Joint Committee on Economy will save any considerable part of the \$2,000,000,000 annually which could be saved on non-defense spending. Taft and Byrd—to name only two of the desirous economists—are not optimistic. On the Administration side the argument is that the higher the costs of government the higher the taxes must be, and that, if a taxpayer has no money to spend with the little men who are being forced out of business, the less is the danger of inflation. Must be a worm in that apple.

## Social Security and the States

FEAR of the new scheme to federalize completely the Social Security plan in 1942, the year of congressional elections, is being somewhat lessened by a



See how good a detective you are!



Try to solve this  
short-short mystery

## The Case of the Nose-Diving Sales Curve



1. The frigid wind of a November night shrieked piercingly through the naked trees as Mr. Oto, the famous detective, hurried toward the steps of the somber mansion of J. Morgan Smyth, the manufacturer. "What can he want at this ungodly hour?" thought Mr. Oto, obviously perplexed and annoyed at the summons he just received from the merchant prince.

2. In the library were Smyth and his advertising manager, Donald Johnson. "Mr. Oto," began Smyth, "something's wrong with our business. We're puzzled. Johnson will tell you the story."



3. "For 10 weeks," said Johnson, "we've been running a newspaper campaign in several major markets, using equally distributed space—all we can take. But results are indifferent in too many spots, and good in too few... Maybe something is wrong with this advertising, but WHAT?"

4. Mr. Oto's practiced eye took in every detail of the ads, then he replied: "Only one thing is wrong with these ads—they're suffering from too much competition for attention. Positioned as they are, your ads are too easy for readers to skip!"



5. Johnson flushed angrily: "How can we control that—we surely can't make Page One!" "No," Mr. Oto smiled back, "but there is a way to get 'preferred position' that's almost as good as crashing Page One!"

6. "Will you please speak plain English?" asked Smyth and Johnson, almost in unison. "Yes," replied Mr. Oto, "listen to this: There is a section of newspapers that gets a reader traffic second only to Page One in volume! You should..."

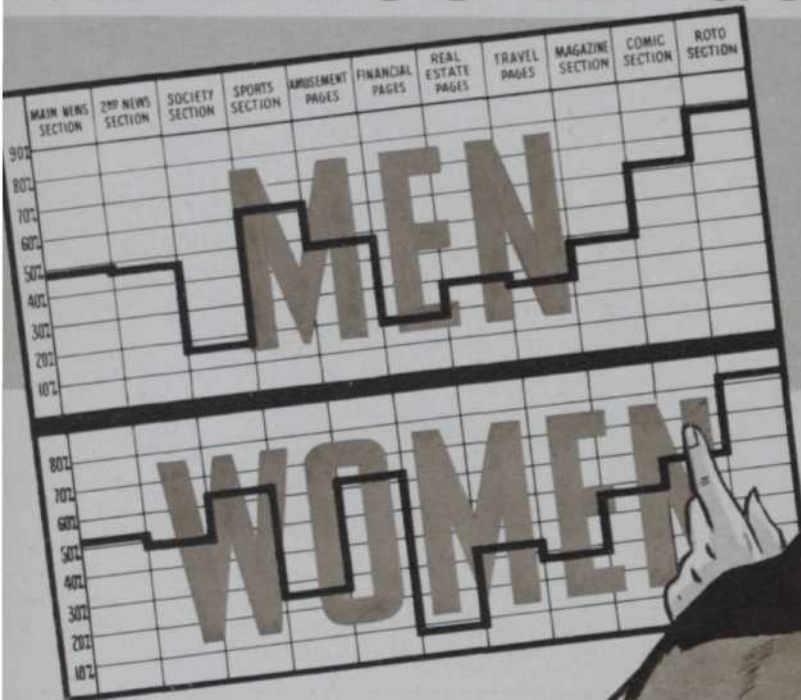
(Before turning this page, can you figure out what Messrs. Smyth and Johnson need to get more reader traffic for their advertising?)



COUNT THE READERS PER DOLLAR  
INSTEAD OF THE LINES PER DOLLAR...



**THEN YOU'LL GO ROTO, TOO!"**



*"This Gallup Method Survey makes a long story short . . . in a glance it shows the average reader traffic for each section of the Sunday newspapers surveyed."*



"Fact is," said Mr. Oto, "every ad gets 'pre-ferred position' in roto. And because each page features highly interesting news and pictures, roto brings people closer to the ads."

"Correct," agreed Johnson, "and I favor roto printing because of the lifelike reproductions it delivers. Then, too, roto gives an unmistak-able quality touch to product pictures."

"Well, gentlemen," said Mr. Oto, "your prob-lem is solved. Switch to roto advertising with its longer and more productive life and watch your sales curve start zooming. Good night!"

**LET ROTO SOLVE THE PROBLEM!**



**KIMBERLY-CLARK CORPORATION**  
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—Established 1872—  
**Manufacturers of**  
**Quality Printing Papers**

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8 South Michigan Avenue

**LOS ANGELES**  
510 West 6th Street





threatened revolt from the states. Ohio's Bureau of Unemployment Compensation has protested in that its balance with the S.S.B. is already \$206,781,298; enough to run the state system for eight years. Ohio definitely does not like the suggestion that this sum should be handed over to the people of less fortunate states. Traced to the "end-pattern" this is a protest against the process of federalization which is the aim of the rebuilders in Washington. It is worth noting that the millions collected by the S.S.B. go into the Treasury in cash money and the S.S.B. gets a government IOU in return. It seems certain that social security taxes will be increased in 1942. The little men who will have been forced out of business by the two-year-plan will not have to pay them. That may be a bright spot. At least it's a spot.

## He Belled the Cat for Labor

MEN wise in Labor's ways think that John L. Lewis may have rung a loud gong with labor when he defied the President on the closed shop in the captive mines. The argument runs like this: labor wants the closed shop in all industries; President Roosevelt has been soft in dealing with labor; the President's position is weak because he had already ordered the closed shop in the Kearny shipbuilding plant; labor thinks the Mediation Board takes orders from F.D.; the Board's action on the Steel Company's captive mines gave labor a useful instrument for future use; labor views with resignation the fact that Lewis may be in the public doghouse but behind its hand says he is a pretty swell guy.

## Frankfurter to F. D. to Lewis

IT was the Frankfurter opinion in the Hutcheson case, the same Labor wise men say, that paved the way for Lewis's brash challenge on the closed shop issue. He wrote that:

So long as a union acts in its self-interest and does not combine with non-labor groups the licit and the illicit under #20 (of the Clayton Act) are not to be distinguished by any judgment regarding the wisdom or the unwisdom, the rightness or the wrongness, the selfishness or the unselfishness—

So the unions could go as far as they liked. Thurman Arnold was forced to abandon prosecution of an indicted band of racketeers in Brooklyn. Strikers almost invariably got what they wanted in the defense strikes that followed and labor grew so cocky that Lewis struck for the closed shop, in defiance of popular sentiment. The argument may be leaky but it is labor's own.

## Centripetal Force at Work

BUSINESS men will watch with interest the decision of the S.E.C. in the International Utilities Corporation case. The S.E.C. had ruled that extravagant salaries were being paid to certain officials and the company was directed to show cause why they should not be reduced. The significant feature of the case is that, if the S.E.C. can control salaries in one company, it can equally control salaries in any other company subject to its rule—newspapers, flour mills, mines, what have you. If the principle is established, it would be but a short step for the S.E.C. to rule that Montgomery Ploosis would not be a satisfactory officer in any such company. By a round-the-table shot the S.E.C. could suggest that Whattaman Bucks might make a good president. If the reader thinks this is improbable he should study current history.

## Thorns Among the Roses

WILDCATTERS think they should be permitted to charge off some part of the cost of drilling a dry well to expenses. Bureau of Internal Revenue thinks a dry well is an investment. Never these twain shall meet.—If you live in a \$50,000 country place complete with a butler, a footman, a chef and a chauffeur, it is an estate and the taxes cost like the dickens.—But if you add a battery of hens and sell some eggs, it is a farm and the taxes shrink.—Senator O'Mahoney thinks O.P.M. should set up a forum for the small business man to which he can repair for advice on his problems.—At present O.P.M. only has a wailing wall for the poor devil.—Congressman Dies' open letter about the 1,240 Reds in government employ must have gone to the wrong address.—Bad temper in Congress because we are sending lend-lease groceries to Britain and not even getting an IOU for them and Britain is selling them for cash.—A businesslike inquiry into the nature of America's fiscal relations with Britain seems inevitable.—Minors in the defense program would welcome such an inquiry. They complain of the extreme bad manners of some of the borrowers.—One body of thinkers urges that this is a good time to make sure that we get our share of raw materials after the war.—They recall that after the first world war Britain and the Netherlands put a hammerlock on the raw rubber without which our automobile industry would have withered like a gourd.—State Department is not greatly interested in these abstractions.—Prefers to pull a brow at Finland.—But some kind of a British-American-army-navy-gold-and-trade after the war combine is up for week-end meditation.—Economists alarmed because freight carloadings are below anticipation. Fear that defense program "is causing unfavorable changes in our economic system".—No one listens to economists nowadays.—Navy more afraid of amateur strategists in Washington than of any combination of sea powers.—Report is that Canada's adoption of the Baruch price ceiling plan will be followed by a Baruch victory here. Not for Baruch, however. He is in the doghouse.

## Following Europe's Pattern

INFORMATION is that the various secret services have a list of 80,000 folks who will be sitting on their hands in concentration camps if and when. Sites for the camps selected and plans for the fence wires already drawn. The concentration, however, will not start until the real defense strike crisis comes to a boil, in perhaps three months. The Administration still hopes the leaders of the closed shop movement can be talked out of their position and definite action avoided by the Government. Labor says talk of concentration camps is blithering nonsense. "The time to get what we want by striking is when the cost of living is rising, there is pressure for more production, and wages and profits are going up." Sometime toward spring.

## Housing "Wild Bill"

WILD BILL DONOVAN is to have a big house for his over-all propaganda agency. Plans are being drawn. If it is to be a marble structure then the agency is to be considered as a permanent addition to the \$30,000,000 a year propaganda set-up of the present. Even if it proves to be one of the new quickies—three months from the first pick-and-shovel to the first christening speech—Colonel Donovan's agency



may be imbedded firmly in the New Order. Poet Archibald MacLeish and Reporter Lowell Mellett continue in their own fields. Limited, perhaps, by the paper shortage which O.P.M. says may force a decrease in book, magazine and newspaper bulk. On the other hand O.P.M. recently advertised for more "information specialists" in a hurry.

That's a nice new name for the old-fashioned press agent.

## Chills and Fever at this Point

CENSUS Bureau reports that there has been what industry would call an overproduction of young folks recently. More young people between the ages of 14 and 24 by some millions than ever before. Competition for jobs harder than ever, too. Outlook is that the young man and woman in the immediate future will have to get in and fight from the gong. Meanwhile F.B.I.'s extraordinary department of criminal records indicates that more persons are fingerprinted for crimes and misdemeanors at the age of 19 than at any other age. Which is a fine state of affairs.

## Attention, Founding Fathers

GENERAL Accounting Office is spending \$10,000 to have its machines rebuilt so they can register in billions.—We got along for 150 years without them.—One of the topnotch accountants says the Treasury's issue of \$25 defense bonds is just funny.—He says the bookkeeping on a \$25 bond at maturity will have cost more than the face of the bond.—And the Treasury only takes in \$18.75 cash.—Brookings Institute has discussed future repudiation.—Not any formal discussions, of course, but the dread word crops up.—If you do not know the standing of the Brookings Institute, look it up.—There are aspects of Washington's boom which are not so pleasing. Expectant mothers have been forced to go to Baltimore and Philadelphia for the blessed event. No doctors, nurses, or hospital beds available here.—No domestic servants, either, take it from the employment agencies.—80,000 in and out at the Union Station where 40,000 used to go.

## Speaking in Billions

NO one in the Government can say within a billion how much money we owe now. No one, of course, can even guess how much we will owe at this time next year.

A bookkeeping set-up could be arranged which would tell the tale. No one wants to hear it. A year ago Senator Davis introduced a bill providing a budget committee for the Senate. It could set up books that would show a trial balance every night. The U. S. Chamber of Commerce has urged that something of the kind be done. A three-card monte expert would get more kindly attention in the Senate than any one boosting that bill.

## Idealist Come to Judgment

UNLESS the best guessers are wrong, Nathan Straus is about due for a stinging promotion. Straus is an idealist, sincere, kindly and temperamental. As chief of the U.S.H.A. he watched the performance of the competitive housing units until he blew up. He told Senator Truman's committee about the confusion, extravagance, duplication and general monkey business. Conclusion in the housing arrondissement is

that, no matter how pure and beautiful he may be, the man who carries that kind of a torch is on his way.

## Friend of the Meat Business

OTHER people may start the day's business in a squeeze of orange juice and a crunch of dry toast. Donald Nelson eats a man's breakfast with steak in it. Probably gets through more work than any other man in government. Chicago's packers might take up seriously the thought of selling breakfast steaks.—Subject to future correction it looks as though Tommy Corcoran has really had a thumb turned down on him. Topnotchers in the Government have flatly declined President Roosevelt's request that a nice place be found for him.—Airmen say that current experience with the huge new planes encourages plans for air-freight transport when peace comes. More and better landing fields must first come. These flying warehouses cannot be set down in a pasture.—World shipping pool is suggested by shipping men to be under control of U. S. Maritime Commission. Britain is cool to it but may be forced to agree.

## Goodbye, Guardsmen?

INDICATIONS are that the National Guard may be little more than a sweet memory when the war ends. It began a century or more ago as an organ of the several states. Now it has been absorbed by the regular Army, its officers are selected, promoted or fired by the Army, the governors no longer command their state units, and the War Department may break up its units at will. This has passed almost unnoticed by the general public in the current hurlyburly. May be accepted as just another item in the federalization process.

## "Cap" Krug is now Czar

J. A. KRUG'S super-utility set-up in the OPM has possibilities not at first suspected. It is a good thing as is, the utility men say. "Cap" Krug is esteemed as an engineer who knows his business and has no political kinks. But to ensure teamplay during the emergency his bureau will supersede the federal regulatory agencies—the F.P.C., the F.C.C., the S.E.C., etc.—and utilities think it will ultimately move in on the state and local regulatory bodies. No one complains as to the present. Krug is czar and is liked. But the utility men wonder if, when and how the federal Government will ever move out.

## Sound the Loud Timbrel

INNER circles say, and their saying is accepted with more or less resignation by the opposition, that we are in the sea war now; that an A.E.F. will be framed in 1942 and will go to Europe in that year or in 1943; that the total cost may be held down to \$130 billions; that the American army will be the most completely mechanized force in the world and that its shooting equipment and planes will be a forever top; that taxes will be as far as possible collected at the source, both to make collection more certain and to lessen the interim borrowing; and that in 1942, draft age will be cut to 18.

*Herbert Corey*



# Trusted Bendix Products

are called to the colors,  
with America's mechanized army!



INTO every aircraft plant in America flows a stream of Bendix products. Starters, generators, carburetors, ignition, instruments, landing-gear, radio—are built for America's defense.

But that's only *one part* of the vast defense task that has been shouldered.

Tanks, trucks, tractors, trailers, scout-cars and "half-tracks" are rolling down America's production lines—a million modern military vehicles a year! They need carburetors, starter-drives and brakes, much the same as Bendix has built for more than seventy-five million peacetime cars and trucks. They demand power braking and remote control systems, which are standard Bendix products. Many have got to have heavy-duty ignition and vibration-free universal joints—and those, too, are Bendix specialties.

Our mechanized army must have these products long ago perfected by Bendix engineering. They are procurable in swift quantity in America's hour of need because this organization has for years served the whole automobile industry, and has the capacity and ability to do the job.

That's America's strength . . . which thirty thousand loyal Bendix craftsmen are working to safeguard. It's a privilege of peace, and you hold it at the price of being prepared to defend it.

BENDIX BRAKES  
BENDIX B-K POWER BRAKING  
and REMOTE CONTROLS  
STROMBERG CARBURETORS  
BENDIX STARTER DRIVE  
BENDIX-WESTINGHOUSE  
AIR BRAKES  
SCINTILLA MAGNETOS  
ZENITH CARBURETORS  
FLAME ARRESTERS  
and FUEL FILTERS  
BENDIX-WEISS  
UNIVERSAL JOINTS  
ECLIPSE  
BRAKE LINING  
ORDNANCE EQUIPMENT

★ *Bendix* ★

AVIATION CORPORATION

Plants at: BENDIX, N. J. • SOUTH BEND, IND. • BROOKLYN • ELMIRA, N. Y.  
SIDNEY, N. Y. • BALTIMORE • NEW YORK • DETROIT • TROY, N. Y.  
PHILADELPHIA • WAYNE, MICH. • BURBANK, CAL. • WINDSOR, ONT.



# NO BUSINESS *Can Escape* CHANGE

Priorities and substitutes put a pinch in civilian supplies, but business keeps trying for improvements

**1 • A LIGHT** gray paint to substitute for aluminum paint has unusual penetrative and protective qualities and approximately the same light reflection as aluminum paint. It can be used over rust spots and galvanized metals without harm.

**2 • A PLASTIC** sheet material is now made with a coating to give the effect of either silver or gold foil. It can replace thin gauge metal in many uses. Despite the coating, it retains some transparency, which allows novel decorative effects.

**3 • A NEW** dust-filtering respirator for workmen is compact, does not interfere with downward or sideways vision, uses an inexpensive throwaway filter. The filter's outer side is porous to prevent large dust particles from clogging up the finer section of the filter.

**4 • A GLASS** building block is now made that is transparent enough to give an almost window-like vision. It has the insulation value of regular blocks, but relieves the shut-in feeling some have in windowless rooms. It is suggested for use in panels or strips built into the walls of obscure glass.

**5 • A NEW** lining felt for linoleum is partially impregnated with asphalt, offers unusual resistance to subfloor movements and to bunching caused by heavy traffic. An ordinary linoleum knife is enough to cut and fit it.

**6 • A NEW** resin derived from gum or wood rosin is pale in color, has a lower acid number, is free of metals, and has a higher melting point and viscosity than natural rosin. It's suitable for preparation of gloss oils, hardened rosin varnishes, spirit varnishes, other similar uses.

**7 • A SMALL** electric device of two pounds' weight is now made to indicate to airplane pilots the intensity of electricity in nearby thunderclouds. It has a neon tube to serve as signal to the pilot.

**8 • RACKS** are now made for easy shop storage. They hold ordinary shop boxes with the front tilted down like a hopper storage bin. The racks interlock and can be built up to any desired height or width.

**9 • TO HELP** substitute for the shortage of containers, there is a flexible corrugated sheet which folds like uncorrugated paper. It serves as a cushion and wrapper, often saving weight.

**10 • AN ECONOMICAL** device for regrinding flat seats in steam, water, and air line valves is now made. Available in sizes from one-half inch to three inches, it requires no special skill to operate.

**11 • CARBIDE** tipped cutting tools are now available as standard stock tools at economical prices. They are ground ready to use, but can be reground into special shapes.

**12 • NEW** goggles for use on snow have a polarizing plastic for the eyepieces which cuts the glare without appreciably diminishing vision. They are light weight, can be worn over glasses.

**13 • HOLLOW** molded plastic tile blocks are now made for illuminated wall and ceiling areas. They are not a structural material, but may be glued or fastened with clips to make decorative sections or partitions. Various shades and mottled effects are available.

**14 • A SMALL** vise for holding tools or small work for grinding is now made with angle adjustments on three planes. It is mounted on a lug base easily fastened to a machine table.

Angular readings for each adjustment are clearly marked and, after adjustment, the settings are tightly locked by cam locks.

**15 • A HOLD** down tool for drill presses operates pneumatically on presses having a cylindrical column. With it, drilling jigs can be reduced to the simplest form and built-in clamps and hold-downs can be eliminated.

**16 • An** automatic, self-contained water purification plant designed for field use has a rated capacity of 9,000 gallons an hour. Units may be operated in parallel for larger requirements. The water is filtered, then the germs are killed by ozone instead of chlorine, which makes a better tasting water, as well as safer operation.

**17 • A SMALL** plastic screen which can reproduce any advertising message in a miniature version of the moving electric letters used sometimes on billboards is now made for counters and windows. The front is embossed with numerous small lenses.

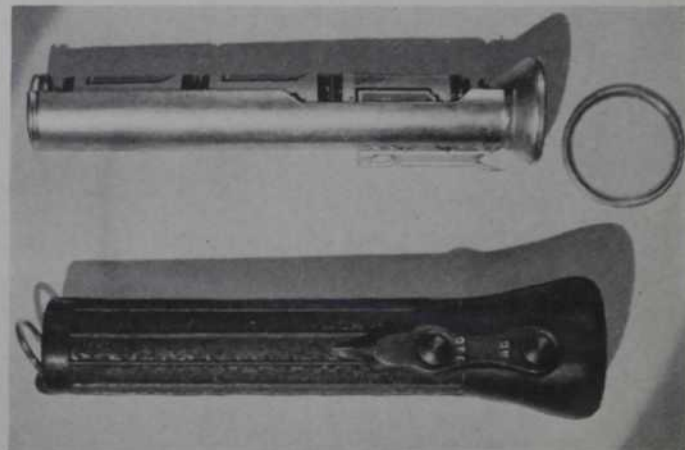
**18 • AN IMPROVED** rust remover and cleaner for ferrous metal gives a chemically clean and roughened surface to which a finish coat clings more firmly.

**19 • A FINGER GUARD** for workmen is now made with leather on one side, a lastex weave on the other. It gives better flexibility and ventilation.

**20 • A NEW** hose clamp is made of solid band stainless steel and is welded with four spots at the nut. A floating bridge eliminates friction so that a torque indicating wrench may be used for tightening.

**21 • FOR NON-SKINNING** varnishes with good resistance to gas effects in foul atmospheres there is a chemical to be added in small quantities. The varnish produced has good durability.

—W. L. HAMMER



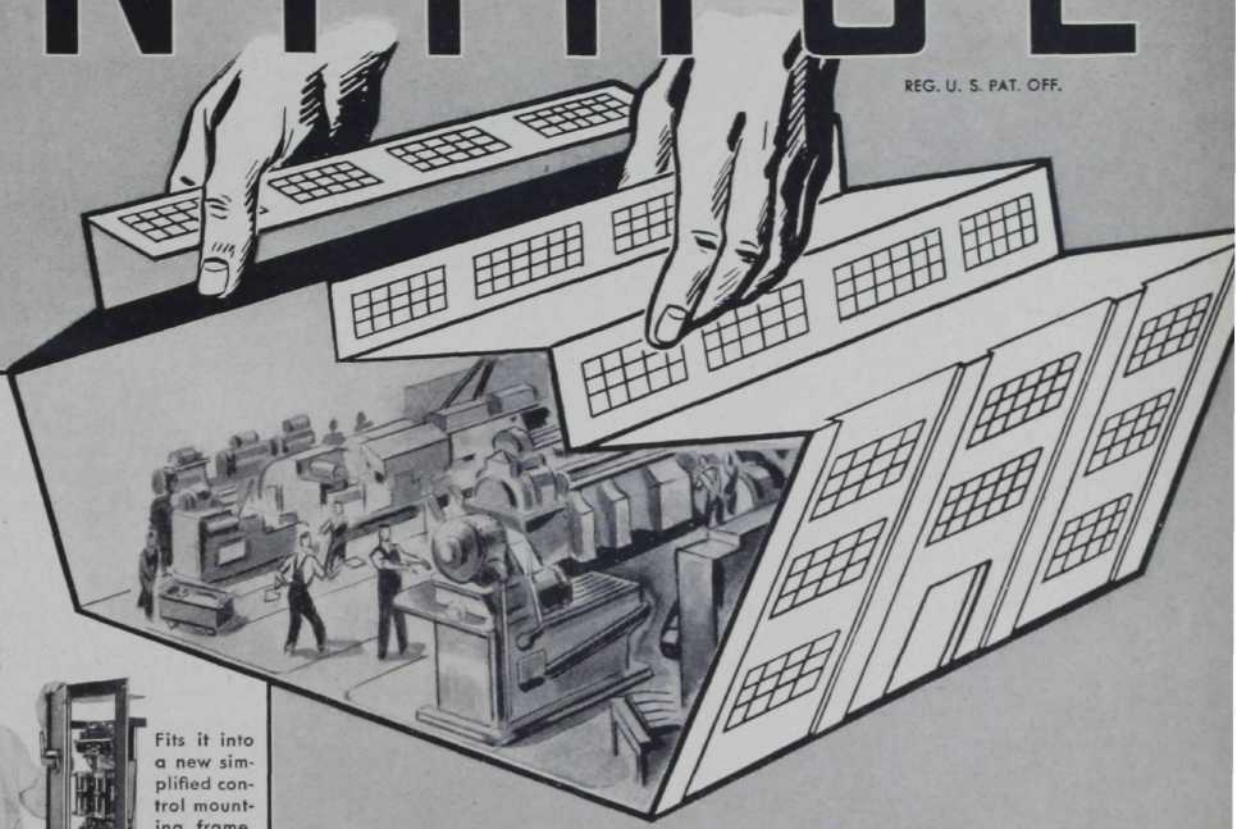
**22 • A NEW** rubber flashlight has a light metallic assembly completely enclosed in a soft rubber case. It has a shatter-proof plastic lens, is watertight and safe around electric wires. It can be used safely in rain, mud, or salt water.

**EDITOR'S NOTE**—This material is gathered from the many sources to which NATION'S BUSINESS has access and from the flow of business news into our offices in Washington. Further information on any of these items can be had by writing us.



# UNITROL

REG. U. S. PAT. OFF.



Unitrol uses a Standard Starter.

Combines it into a flexible built-up Section (see below).



Fits it into a new simplified control mounting frame.



## HOW TO PACK

Result (below) is a complete, enclosed Motor Control Center as big or small as you want. Changes, additions, revisions are made as simply as changes in your office's modern metal filing cabinet.



*More Production into Less Space!*

Whether you are building, or just cramming more motorized machines into your present quarters, let Unitrol cut down the space required for each machine and save you more space than has hitherto been possible.

For this important advance in Motor Control housing, pioneered by Cutler-Hammer, enables you to put two or three times as many starters in the space required by conventional starter mounting methods. Unitrol "cleans up" the space around machines, permitting them to be crowded closer together. And Unitrol offers so many other advantages...in design, construction, range, flexibility and adaptability...in space, time, money and building economies...that manufacturers

in every type of industry are rapidly swinging over to Unitrol.

If you haven't read the book "UNITROL... the next step forward in Motor Control Practice", you should do so at once. A copy will be sent you free, without obligation. Simply dictate a letter to your secretary at once, before you forget! CUTLER-HAMMER, Inc., 1251 St. Paul Avenue, Milwaukee, Wisconsin. Associate: Canadian Cutler-Hammer Ltd., Toronto.

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# If Statistics

**A** MAN from Gloucester came to Washington to learn about fish. He called the Bureau of Fisheries, but discovered that this is now the Fish and Wildlife Service; that, instead of being in the Department of Commerce, the new Service is in the Department of the Interior.

Did the gentleman wish to know about the cod and the haddock?

The gentleman wanted information on all sorts of fish; the production of fish and the consumption of fish, the scope of the fisheries industry, the number of fishing craft, the financial condition of the industry, and so on, *fin finitum*.

Well, in that case the gentleman should get in touch also with the Bureau of the Census and the Bureau of Foreign and Domestic Commerce of the Department of Commerce; with the Bureau of Labor Statistics of the Department of Labor; with the Agricultural Marketing Service of the Department of Agriculture, and with the Tariff Commission.

Then, of course, he could run down the decisions of the Supreme Court with the help of someone in the Depart-

The man from Gloucester learned that many Government agencies had fish statistics—no one bureau had them all

GEORGE LOHR





# Can Win Wars, We're Safe

**THE DEFENSE program requires us to give up accustomed luxuries and some necessities but the production of government figures goes on regardless**

ment of Justice, he could find out about international fishery relations in the Department of State, and possibly something in the Federal Trade Commission dealing with the restraint of fisheries trade or with false advertising of fish.

If he desired, the man from Gloucester could look at some fish in the basement of the Department of Commerce. Meanwhile, he might wish to talk with Mr. Power. Mr. Power is an associate statistician of the Division of Fisheries Industries.

Mr. Power pointed out with enormous patience that the gentleman had a large order, that, in recent years, the volume of fisheries information released by federal agencies had increased greatly; that, indeed, the Fish and Wildlife Service alone now issued more than 50 statistical fishery bulletins annually, or at the rate of one a week.

The man from Gloucester carried home a big bundle of fishery statistics

and statistical correlations, charts, graphs, and diagrams. He had the promise of more to follow on the free mailings of the Government. The stuff came with every post. At first he kept abreast of it. Then, one day he fell behind, and now the reports accumulate scales in his fisheries plant.

## Statistics on statistics

TWO years ago the Central Statistical Board reported to Congress that the Government had collected 136,000,000 statistical reports of one kind or another in the year ending June 30, 1938. These reports varied in length from postcard size to questionnaires of 100 or more pages requiring the answers to upwards of 5,000 questions.

The Board cited instances of duplication in these statistical inquiries, admitted that this was a terrific burden upon industry, and recommended legislation and regulations to eliminate

some of this waste. The Board's report was printed as House Document No. 27, Seventy-sixth Congress, First Session.

There the matter apparently rested.

Long before the Central Statistical Board appeared upon the federal scene, the Bureau of Efficiency spent more than three years in surveying government statistical activities and preparing a 400-page report for Congress. The Bureau said:

Practically every bureau in Washington collects or disseminates statistics of one kind or another. Statistics of agriculture begin with the seed and follow through to the marketing of the ripened product. Statistics of manufactures extend from the mining of the crude ore to the production of the manufactured article; those of commerce, from the lighting of rivers and harbors to the consumption of imported commodities; and those of social relationships from a mere enumeration of population to elaborate data regarding the incidence of disease.

The statistical inquiries of Government continue to increase, the armies hired to make them to expand. The Bureau of Efficiency reported only 65 federal agencies collecting statistics, the Central Statistical Board raised this to 88, but their successor—the Division of Statistical Standards of the Bureau of the Budget—now lists more than 270 in its fifth edition of the Directory of Federal Statistical Agencies.





Besides collecting the raw statistics, many of these agencies tabulate the figures, devise indices, plot curves, and super-impose these curves one upon another to discover statistical relationships. Great discoveries are made in this way. It is learned, for example, that there is a close relationship between the changes in industrial activity and the consumption of consumer goods; that, as prices advance, the production of commodities tends also to increase.

The federal analysts say that, of course, the major patterns of these phenomena are reasonably predictable, but that the important thing is the degree of their correlation. The relationship may be closer at one time than at another, depending upon the amount of deviation.

Interesting curves

AN economist in the Department of Agriculture recently discovered there is a close correlation between the curves of industrial activity and the length of women's skirts. Both curves went up in the 1920's, fell in the depression of the 1930's, but are reported to be rising now. There's danger, though, that the lines will cross, since skirt lengths are close to their upper limits, whereas industrial production continues to rise.

Similarly, a direct relationship has been found between the curves of industrial activity and the consumption of ice cream. The consumption of ice cream fell sharply during the recent depression, but is now up to the largest on government record.

Another set of curves deals with the relationship between industrial activity and the consumption of butter. When business is bad, the consumption of butter decreases. Still another correlation is that, as the smoke from industrial plants rises, the smoking of cigars and cigarettes also goes up; and, as industrial production rises, so does the use of soap.

The Civil Service Commission tried to count the number of statisticians on the federal pay rolls. Before it got through, so many more statisticians had been hired that the Commission had to revise the figures, and is revising

them again. The statistical turnover is so rapid that the government statisticians simply can't keep up with it.

Meanwhile, the Directory of Statistical Agencies lists 2,000 top-flight statisticians designated as "professional, administrative, and supervisory personnel of the federal statistical agencies in Washington." These are the drum majors of statisticians, the fellows who flourish the slide rules and twirl the statistical batons. Unnamed thousands of lesser statisticians and statistical aides are in the ranks.

The directory begins with A. Palma Aaronson in the Office of Indian Affairs, and ends with Hanina Zinder of the

conservation Division, and in St. Elizabeth's Hospital.

The federal statisticians are found all over the world. They get compilations from industrial and agricultural trade attaches, make free translations of tabular matter in foreign language newspapers and magazines, and make their own statistical estimates of social and economic conditions in far places. Thus a federal handbook reveals that there were 76,859 geese in Estonia in 1934, as compared with only 60,124 geese in 1930. Germany had 5,855,786 geese, Yugoslavia had 1,132,507 geese, and Canada, Formosa, and Lithuania had lesser numbers of geese.



The Government has discovered a close correlation between industrial activity and the length of skirts

Federal Power Commission.

The aim of the directory, it is stated, "is to facilitate the interchange of statistical information among government agencies." People coming to Washington in quest of statistical information about their own business may be astonished to hear this, but the statement is right there on p. ix of the directory. The book covers only Washington. It makes no attempt to cover, for example, the 100 or more statistics factories operated by the Department of Agriculture elsewhere.

Statisticians everywhere

IN Washington, the Government statisticians are housed in 106 buildings, beginning with Agriculture (Administration) and ending with the Willard Building. Government statisticians are found in the Arlington Hotel, the Bond Building, the City Club, the Earle Building, the Fisheries Building, the Garfinckel Building, the Inter-Ocean Building, the Lemon Building, the Old Land Office, the Riverside Apartments, the Superior Motors Buildings, and so on.

The federal agencies begin with the Bureau of Accounts in the Post Office Department, and end with the Works Projects Administration. There are statisticians in the Office of Adviser on International Economic Affairs, in the Bureau of Aeronautics, in the Bureau of Animal Industry, in the Office of Export Control, the Federal Crop Insurance Corporation, the Fish and Wildlife Service, Howard University, the Petroleum Con-



Among 131 pages of other things, the handbook discloses that 6,200,000,000 eggs were laid in Germany in 1934, around 4,055,000,000 in Great Britain and Northern Ireland, and 1,136,000,000 in the Irish Free State. After long research, the agricultural officials concluded that

egg consumption in the United States is relatively large. Aggregate utilization, of which human consumption accounts for more than 90 per cent, in many years exceeds 300 eggs *per capita*.

"The quantities of eggs consumed," the report continues, "surpass in weight those of most other foods, exceptions being milk, meat, potatoes, and flour products. Less than one per cent of the chicken eggs consumed in the nation are imported. The rest are of domestic production, nine-tenths of which are on the farms. More than 1,000 years ago, country people paid their taxes by supplying imperial households with eggs."

Another invaluable publication is "Agricultural Statistics, 1940." Here it is revealed, page 720, that the agricultural extension agents made 2,973,667 visits to farms in 1938, received 6,644,664 telephone calls, wrote 8,701,984 individual letters, distributed 13,998,138 bulletins, made 19,293 radio talks, held 1,278,725 meetings, and conducted 767,714 "result demonstrations." All these figures were considerably larger than in 1930, and yet the farm economists were compelled to report in 1938 that agriculture had gone into a "recession."

### Figures on everything

THE largest government statistics mills in Washington are in the Departments of Agriculture and Commerce. Here are heard the incessant clanking of comptometers, and the whirring of mimeographs and multigraphs spewing out statistical reports by the millions of copies. The subject matter of these reports deals with every natural, physical, and psychical phenomenon—beginning before birth, but not ending after death. Commerce deals with every production and distribution process of industry; Agriculture likewise as to farm products.

Officials of the Department of Commerce complain that many people think that all the Bureau of the Census does is to count the population once every ten years. The fact is that this is a small part of the statistical compilations, as the manufacturers of every article of commerce—from the largest of locomotive parts to the tiniest of wedges that fit into the head of an axe—well know. Hundreds of statistical products are on the assembly lines at the same time, and great care must be taken not to get the figures mixed.

Similarly, the officials in the Department of Agriculture point out that

many uninformed persons have the idea that only crop reports are produced. In addition, the Department puts out daily, weekly, semi-monthly, monthly, bi-monthly, tri-monthly, semi-annual, and annual market reports from more than 85 branch statistical mills all over the country. No farm commodity is overlooked in the processes of statistical projection; there are reports on emmer and spelt, on rape seed and hairy vetch, on every crop and livestock product.

The raw statistical material in industry and agriculture is gathered in person and by mail by collectors all over the country, and dispatched to Washington where it is transferred to punch cards, and the punch cards are run through machines having electrical eyes and fingers that make a mechanical classification. Stencil cutters and typesetters then pick up the tabulations, and the stencils and type forms are soon revolving on the duplicating machines and printing presses.

The completed reports are assembled, stuffed into envelopes, bundled and dumped into mail trucks, trains, and planes for distribution to millions of persons on the thousands of mailing lists of the departments and the Superintendent of Documents.

But the job of statistical production is not finished with the mailing of the reports. Figures are being continually revised, and sometimes, while one batch is being run in one part of a plant, revisions are being made in another. Sometimes, the revisions get into the mails ahead of the original reports, as in the case of the so-called *Statistical Abstract* which is released by the Bureau of the Census long after the various agencies contributing to this book have made revisions.

The *Statistical Abstract of the United States* is a compendium of 916 pages ranging all over the statistical stratosphere—from the exports of billiard tables in 1938, the manufactures of sausage casings in 1937, the activities



In Washington, Government statisticians are housed in 106 buildings. Others are stationed all over the world, engaged in counting almost everything



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in the wool-pulling industry, to the wind velocity in selected cities—and it has become a great source of material for radio quiz programs. The statistics are always a little stale (the 1939 edition was still circulating in May, 1941), but officials point out that this makes no difference to persons interested in the trend of things. They hoped in May, 1941, that the 1940 edition, including statistics for 1939 and revisions for previous years, would soon be out.

Besides eternally revising their original figures, the federal statisticians have a predilection for making *per capita* computations. This consists in dividing the total production of things by the population. So it is learned upon federal authority that each man, woman and child in the population smoked 3.54 pounds of cigarettes in 1938, chewed .90 pounds of tobacco, took .29 pounds of snuff, and smoked .99 pounds of cigars. He, she or it ate 1,882 pounds of food in 1939, but only 13.3 pounds of this intake was fish, as contrasted with 55 pounds of fish consumed by each man, woman and child in Japan, 52 pounds in Sweden, and so on down through lesser quantities in Norway, Denmark, Netherlands, Australia, Chile, and Egypt.

All the figures ultimately go through the processes of statistical indexing, charting, and graphing. A big chart-and-graph factory is in the Bureau of Agricultural Economics, where a score or more artists are bent over their drawing boards, and, with India ink, make dot diagrams, bar charts, pie charts, frequency charts, ratio charts, cross-hatch maps, and curvilinear correlations. These

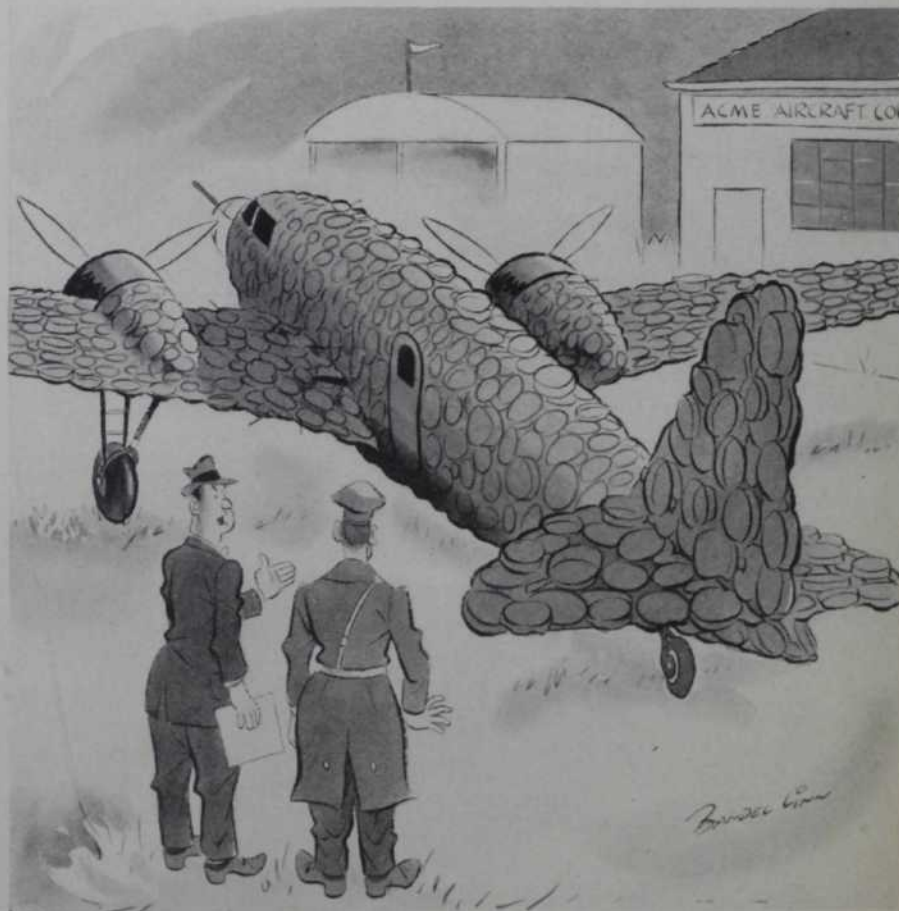
are the materials the top-flight statistical manipulators and economists feed upon.

Once every five years the Department of Commerce takes an agricultural census. Officials of the Department of Agriculture think that they themselves should take the agricultural census, instead of merely making annual agricultural estimates between census years. They assert that the Commerce officials know nothing about cows, pigs, chickens, and the like, but the Commerce officials retort that the agriculturists know nothing about statistics.

Trouble is that the figures of the two departments never agree, and this upsets the statistical basis for farm relief. The Department of Agriculture had estimated there were 32,000,000 persons in the farm population in 1939, but the agricultural census showed only 30,000,000. Unless the agricultural statisticians revise downward their estimates of farm income, the census figures show that, *per capita* and *per farm*, the tillers of the soil are much better off financially than Congress has been led to believe.

The Department of Agriculture infers in its monthly periodical, *The Agricultural Situation*, that the Department of Commerce may be correct in its farm population figures, but adds that

On the other hand, there may be a large number of persons who live in the open country and carry on sufficient agricultural operations to be counted in the farm population in periods of widespread industrial unemployment, as in 1934, but who contract their agricultural operations when non-farm employment



"There she is, General—the first bomber made from old pots and pans"



is more readily available, as in 1929 and 1939.

These people could shift into or out of the farm population without changing residence. Another possibility lies in the difficulty of enumerating small scale agricultural operations with the result that, in some areas, the figures for 1930 and 1940 may not be directly comparable. As more detailed data become available, the influence of these and other factors upon the comparisons will be more clearly revealed.

The Department of Commerce also reported a decrease of three per cent in the number of farms in the course of the past decade. But the agricultural department challenges this with the statement that:

This decrease can be accounted for by the decrease in number of share croppers in the southern states. If share croppers in both periods had not been classified as farm operators, the Census would have reported a small increase instead of a decrease in total number of farms.

### To oversee statisticians

THE man who knows most about the statistical activities of Government is Stuart A. Rice of the Division of Statistical Standards. Dr. Rice has his offices in the gingerbread pile that is the State, War and Navy Building directly across from the Executive Offices of the White House. He is in charge of a staff of 23 who try to discover what the Government statistical agencies are doing.

Dr. Rice also supplies the White House with much statistical information on order, but statisticians elsewhere in the Government assert that these figures are not always the best or the latest obtainable. They say that the statistical G-Men on Rice's staff do not uncover everything, that it would be much better if the White House got its figures from the Government boards, bureaus, commissions, and corporations direct.

One suspects, however, that there is more than a little of professional jealousy here since the Division of Statistical Standards, operating as an adjunct of the Bureau of the Budget and the White House, has nipped more than one departmental statistical project in the bud. But even Dr. Rice admits that his Division has a long way to go in trying to wipe out all of the duplications and overlaps in reports as between agencies.

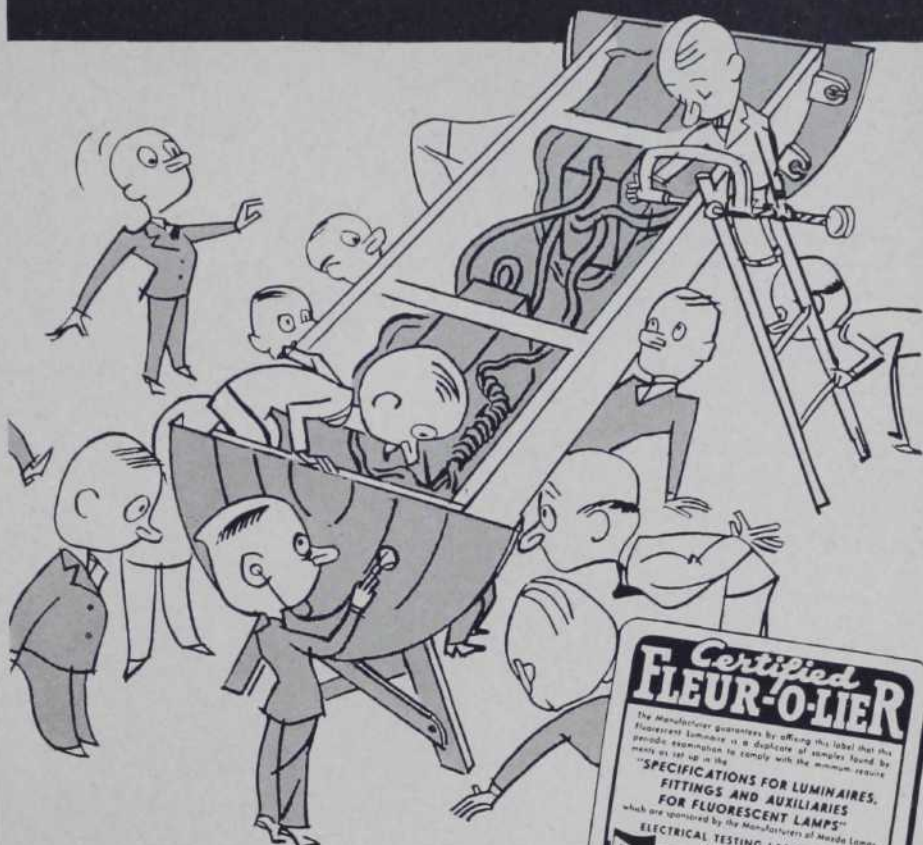
But, while Dr. Rice's office may know nearly all that goes on in the statistical purlieu of Government, there is no way for the taxpayer to find out as much except by personal investigation. If a man wants all the government reports on fish—or any other commodity—he must canvass the entire Government.

The man from Gloucester probably will never catch up with the government fishery statistics. But this no longer seems to bother him.

Probably he will never know that, in 1937, there was a "slight recession" in the yield of fish and eggs derived from federal hatcheries, the output in that year having fallen to 7,919,100,000 fish and eggs from 8,120,000,000 fish and eggs produced in 1936. Nor will it be known how many oysters the government investigators spied upon in Chesapeake Bay last summer.

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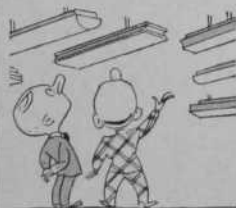
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## MEMO

# for Busy Readers

1. More people are at work
2. A new way to clean snow
3. Costs of government up

### Job Figures Still on Rise

HOWEVER much or little the specter of future joblessness may blight the bloom of the current boom, optimists can take comfort from the record rise in employment. Looking at the figures in effect at the beginning of the new fiscal year, the Alexander Hamilton Institute concludes that unemployment will continue to decline during the remainder of this year and it is possible that it will be practically eliminated by the end of 1942. Moreover, it is probable that unemployment will not become a serious problem again until the present emergency is over and the Government curtails its expenditures for defense.

Unemployment in the United States decreased in July for the sixth consecutive month and reached the lowest level since December, 1929. The number of persons unemployed declined to 5,155,000 in July from 5,772,000 in June and from 10,084,000 in July last year. Unemployment in July this year was thus only about half as great as in the same month last year.

Employment in July was at the highest level on record. The number of persons employed rose to 47,786,000 from 47,137,000 in June and from 42,473,000 in July last year, a gain of 5,315,000 for the year.

### Salt Proves Snow Bane

HIGHWAY maintenance departments of several cities in the eastern snow belt, among them Rochester, Binghamton, Providence, Newark, and New York, have solved with auger-action rock salt, to a satisfactory degree, the ever-harassing problem of snow removal from city streets.

At the beginning of a snow storm salt is spread on streets and highways. Merchants have praised this method not only because the streets in front of their places of business are cleaned more quickly, an obvious convenience for shoppers; but also because the use of salt prevents the tracking of store aisles and entryways.

In Rochester, N. Y., every property owner is assessed annually for snow removal about \$5 a year for a 40-foot frontage. To make this tax collectable without protest it is imperative that the highway maintenance department do

the quickest and most efficient job possible. Last year Rochester had more than six feet of snow, and cleared 450 miles of streets.

Binghamton, N. Y., started using salt last year, found that after an all-day snow storm, with a two foot fall of snow, the streets could be cleared early the next morning, and be practically dry before 9 a.m. Merchants who used to complain of other materials being tracked on their floors wanted to know what this "wonderful new product" was. Binghamton now clears all of its 150 miles of streets with salt.

A few years ago, New York City used 40 tons of rock salt, as a test, in snow removal. Three years later it used thousands of tons. Faced with the biggest street clearing job in the country when a snow storm grips the city, New York plans increased use of salt this winter.

Advantages claimed for salt: one application is normally sufficient to provide clean, dry streets within a few hours after a storm has stopped; repeated spreadings are seldom necessary, which obviously cuts down the operating expense in man hours of labor and wear and tear on equipment; gasoline is saved; no sweeping-up is necessary after salt is used on the streets, because it melts the snow and forms brine, which runs off readily into catch basins.

### Tax Bill Soars In Non-Stop Flight

NATIONAL tax bill is now upwards of \$14,500,000,000. At the beginning of the World War in 1914, federal, state and local governments were collecting no more than \$2,000,000,000 a year in taxes. Ratio of taxes to national income rose to 20 per cent in 1940 as compared to only six per cent in 1913. Ratio of expenditures to national income ballooned to 27.5 per cent in 1940, up from the level of eight per cent in 1913.

Before the World War, the federal Government owed \$1,000,000,000. Now, it owes more than \$50,000,000,000, and the figure is moving toward \$100,000,000,000, or \$4,000 for every family. Since 1913, expenditures have multiplied nearly seven times—from slightly less than \$3,000,000,000 to almost \$20,000,000,000 in 1940.

Estimates of ultimate costs of the current defense effort are tentative, but the Tax Foundation makes the point that



national defense expenditures for the fiscal year 1941 were more than \$6,000,000,000. Revised budget estimates as of June 12, 1941 jumped expenditures for the fiscal year 1942 to \$15,500,000,000. These figures, the Foundation warns, reveal only in part what total defense means in terms of cost.

### A Nation of Daniel Boones

ON target ranges, in fields and forests the country over, a peaceful army of shooters is revitalizing the tradition that American men and boys are potential Daniel Boones. Seasonal accent is again provided by the rush of 6,000,000 citizens to hardware and sporting goods stores for hunting licenses and outfits.

What this interest means in terms of national defense is revealed in reports from military training centers. Artillery officers find that among recruits without previous shooting experience, only a few "take to" the machine gun and learn it readily. But 85 out of 100 with previous experience in using firearms can learn the machine gun quickly and handle it skillfully. The Marine Corps gets most of its heavy gun pointers from the ranks of its expert riflemen. The same general trend exists in the Navy even to pointers for the 16-inch gun. The man who has become familiar with the handling, sighting and holding of a rifle naturally grasps the instruction on the heavier gun more readily and "holds" on the target more instinctively. Other qualities useful to the soldier are developed by the hunter.

Assessing the nation's resources in respect to riflemen, the Northwestern National Life Insurance Company reasons that, if the regular use of the more than 10,000,000 rifles sold to private owners in the ten-year period just ended amounted to only 25 per cent, 2,500,000 Americans know how to handle a rifle. Further, the Company estimates that another 7,000,000 can use a shotgun.

Considerable organization is indicated by the fact that more than 3,000 rifle clubs belong to the National Rifle Association. Exclusive of its 150,000 individual members are the members of the 1,500,000 rifle shooters under 19. In the last ten years almost 1,500,000 riflemen have taken club courses of instruction. These men are available as instructors and coaches for home defense units.

How different the situation is in Britain the report reveals in regarding hunting as a "lost art" to the great majority of the people. Restrictive legislation in effect for many years is a major cause. Comparatively few individuals even own firearms. When organization of the home defense force was undertaken, 60 per cent of the enrollees were found never to have had a gun in their hands. Much time was lost in teaching them not to shoot themselves or each other before they could be put on the range for their first actual target instruction. An average of one firearm to 20 civilians was disclosed in some parts of Scotland and North England. This discovery resulted in a hurried call for all spare sporting guns and any other shooting irons that Americans could spare for British home defense.

## New emphasis on an old mainstay

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## Housewives Join the Hunt for Substitutes

(Continued from page 52)

she'll murmur, "What about glass jars?" (Packers are already taking the hint; the two-pound glass preserve bottle worked out by the Army is now being adopted in various size jars for civilian lines.)

She won't object to colored cotton waste instead of white linters in mattresses, and she'll join the Army even if she has to rob the kitchen of aluminum cooking utensils and enthusiastically experiment with the new glazed porcelain pots and pans.

### A sample of inflation buying

BUT let her take one quick look at headlines announcing a new crisis in Japanese-American relations and she'll grab her pocketbook, as she did last August, and dive headlong for the nearest hosiery counters. She gave the whole country then a taste of a consumer buying orgy of the kind that characterizes an inflationary era.

The American woman is determined to have, at any price, all the silk stockings that still remain to be made up, but she'll also accept substitutes, if they're attractive, well-made, and will wear, even if she has to pay more for them.

That's the hosiery story, and that's pretty much the tale that covers curtail-

ment of other consumer goods. Canny manufacturers are guiding themselves accordingly. So are retailers.

As for hose, since that department is one of the most profitable—accounting for 31 per cent of total department store sales in 1940—everybody from the mill to the shop girl is deeply concerned. Also, what's happening to hosiery is a key to what is taking place in the cotton, rayon, silk and Nylon world today.

In two words, the story is this: Nylon enjoys the greatest consumer acceptance and accounts for better than 20 per cent of all shipments of women's full-fashioned hosiery. That is now 85 per cent of total Nylon production but the output will be doubled by the spring of 1942 when Du Pont's new plant goes into full swing.

Meanwhile, rayon, with plants working at capacity since 1939, has to be doled out. High twist cotton yarns could be substituted for silk in stockings but both the number of spindles available for this (and other cotton needs) and amount of long staple cotton is limited. Men, it appears, aren't fussy about what they're getting; neither are children.

Already the Christmas stocks in a good part of the full-fashioned hosiery have rayon or lisle tops and some, lisle

feet as well. Even then there's some question as to whether Santa Claus will find enough to go around.

In 1940, some 43,000,000 dozen pairs were shipped off to retailers and 2,530,000 were sold in December. Researchers at *Women's Wear* say they've queried some 75 hosiery mills and question whether there'll be 1,000,000 dozen pairs on hand this Yuletide; the National Association of Hosiery Manufacturers is more hopeful.

Ask Mrs. Fifth Avenue or her sister in the subway how they feel about it all, and they'll answer calmly, "Oh, the business men will find something to take the place of what we have to give up!"

There is a sublime and general confidence in American industry all along the line of consumers. They may have been reading impassioned speeches about the importance of sacrificing civilian needs to war economy, but it simply hasn't permeated the national consciousness. The American business man will take care of all that, they say. Perhaps he can.

Meanwhile, three lines of "civilian defense" have already gone into action.

### Information on substitutes

THE first service designed to guide the consumer through the economic whirlwind includes the setting-up of "information centers" throughout the country. The initial one has already started in Detroit, and Williamsport, Pa., is following soon.

Sponsored by the Women's Division of the Office of Civilian Defense, these centers promise first aid to the housewife in her battle with the defense-era home budget. For example, when a shortage of metal tops for home-canning jars looms on the list of patriotic denials, information regarding substitutes, and remedies for seemingly unreasonable price rises are to be made available.

Supplementing these analyses of market situations, the American Standards Association has also gone into action.

At the request of Harriet Elliott, Associate Administrator of the Office of Price Administration, the Association sat down last September with representatives from the Government, industry, labor, and you and me (the consumer).

The primary purposes of these discussions are three: to save raw materials in durable goods competing with defense orders by cutting down nonessential numbers in the manufacturers' lines; to protect the buyer by specifying quality of hidden vital parts with less regard to surface eye-catchers and sales-pullers; and to provide a quality yardstick for determining fair prices.

The program is too new to announce results. But one thing is sure—the gadgets and frills will be cut out. "Simplification, not standardization" is the watch-word.

There is no serious shortage of cotton; wool supplies are sufficient on a curtailed simplified pattern basis, and there is promised expansion of man-made fibers.

Finally, and here's where that good



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All the housewife and her husband want to know is, "Are they just as good, and reasonably priced?" The answer is that most manufacturers expect to be in business after the emergency is all over.

They wouldn't knowingly risk a black eye in their relations with the public by turning out an inferior ersatz product now.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933, of Nation's Business, published monthly at Greenwich, Connecticut and Washington, D. C. for October 1, 1941.

City of Washington, County of District of Columbia, ss. Before me, a Notary Public in and for the state and county aforesaid, personally appeared Merle Thorpe, who, having been duly sworn according to law, deposes and says that he is the Editor of Nation's Business and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, Chamber of Commerce of the U. S. of America, Washington, D. C.; Editor, Merle Thorpe, Washington, D. C.; Managing Editor, Raymond Willoughby, Washington, D. C.; Business Manager, Lawrence F. Hurley, Washington, D. C.

2. That the owner is: Chamber of Commerce of the United States of America, said body being an incorporated organization under the laws of the District of Columbia, its activities being governed by a Board of Directors. The officers are as follows: President: Albert W. Hawkes, President and Chairman of Board, Congoleum-Nairn Inc., 195 Bellgrove Drive, Kearny, N. J. Vice Presidents: George S. Hawley, President, Bridgeport Gas Light Company, Bridgeport, Conn.; Clem D. Johnston, President, Roanoke Public Warehouse, 369 W. Salem Avenue, Roanoke, Va.; Thomas S. Hammond, President, Whiting Corporation, Harvey, Ill.; I. N. Tate, Vice President, Weyerhaeuser Sales Company, St. Paul, Minn.; James F. Owens, President, Oklahoma Gas & Electric Company, Oklahoma City, Okla.; Eric A. Johnston, President, Brown-Johnston Company, Spokane, Wash. Chairman Executive Committee: John W. O'Leary, Chamber of Commerce, U. S. A., 1615 H Street, N. W., Washington, D. C. Treasurer: Robert V. Fleming, President and Chairman of Board, Riggs National Bank, Washington, D. C. Secretary: Ralph Bradford, Chamber of Commerce, U. S. A., 1615 H Street, N. W., Washington, D. C.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

MERLE THORPE  
(Signature of Editor)

Sworn to and subscribed before me this 26th day of September, 1941.  
(Seal)

WALTER HARTLEY  
(My commission expires Sept. 1, 1942)



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# The MAP of the Nation's Business

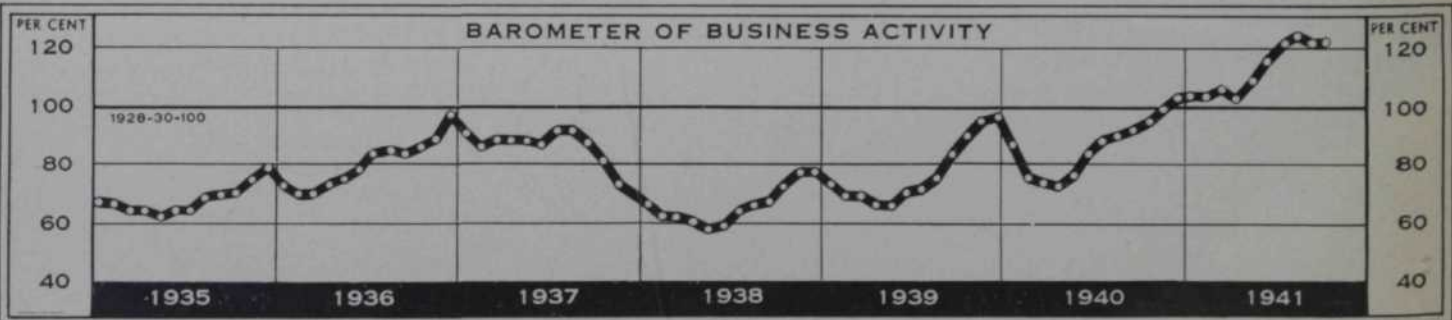
By FRANK GREENE



RAPIDLY expanding defense output offset effects of priorities in non-defense manufactures and held national industrial activity in October at previous high levels. The declining trend continued in consumers' durable goods lines. Increasing labor disturbances retarded vital defense industries, although steel output surpassed all previous monthly records, despite these and scrap shortage troubles. Automobile production fell short of quotas while car sales declined proportionately due to credit restrictions and higher prices. Railroad revenues soared as highest carloadings since 1930 were reported.

Oil and electricity output both topped all records and rising paper demand exceeded productive capacity. Engineering awards, however, dropped sharply. World news produced lower stock market and commodity prices with diminished security transactions, while retail trade, though still above 1940, was reduced by previous abnormal buying. Bank transactions held at the high level of 27 per cent above last year.

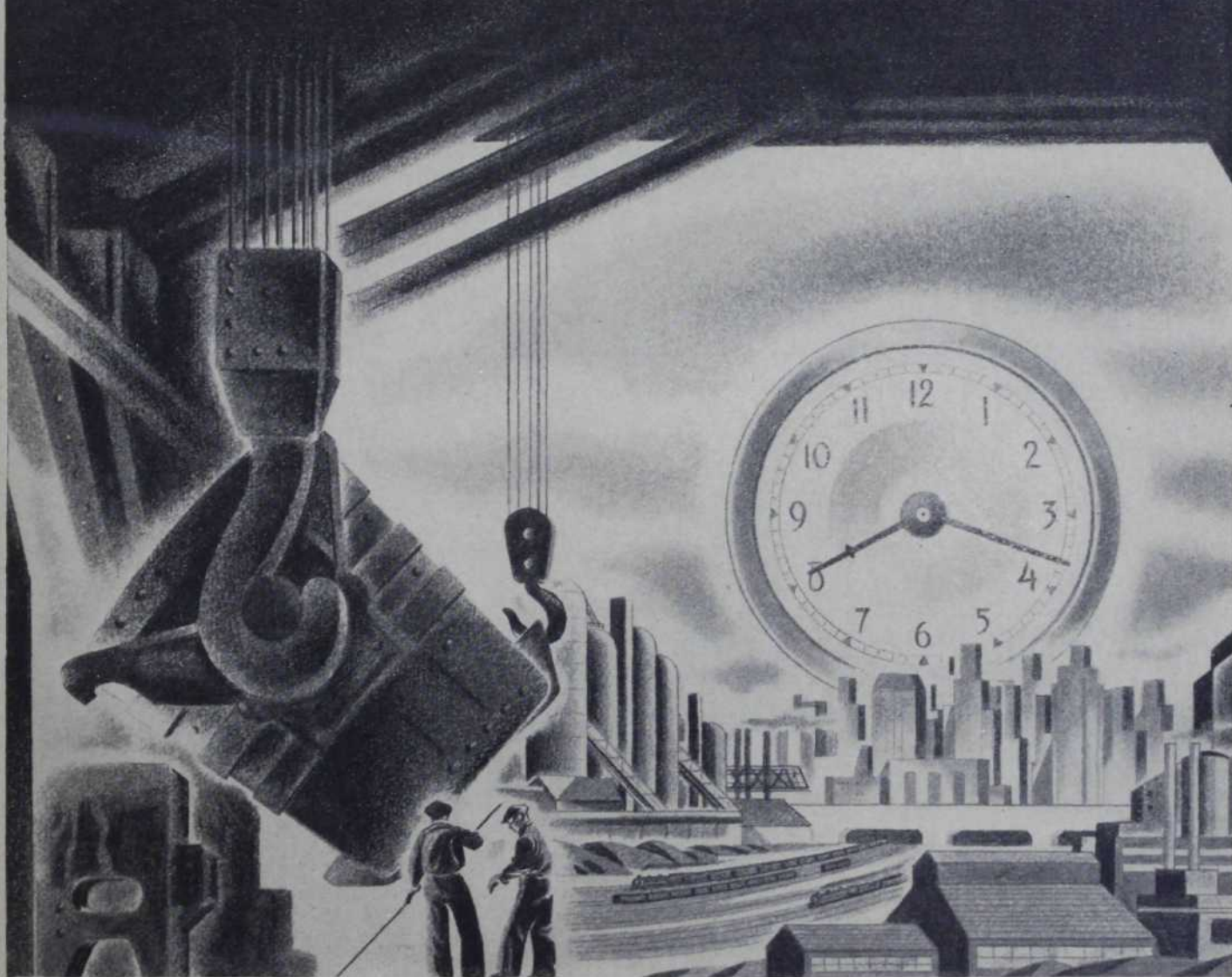
Combination of high industrial activity and agricultural prosperity maintained conditions above a year ago



While the upward trend in farm products and foods was temporarily halted in October, the volume of business activity remained at the high level of preceding months, despite scattered strikes in some defense industries



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## Harmony in U. S. Handouts

(Continued from page 50)

sands of miles of roadside billboards with the billboard faces and the 10,000,000 of unemployed waiting for the next boom—if Democracy is only this, then Democracy cannot survive attack, for Democracy is not a cause that men will fight for.

There is no suggestion that Mr. MacLeish would do away with the automobiles, the telephones or the "simpering legs." It is just that, being a poet, he wishes people would employ higher, if vaguer, terms when thinking of Democracy. He is not destructive. His feeling is explained in this passage from "The American Cause":

To destroy a machine or a manufacturing plant is one thing. The loss is great but the plant or machine is replaceable.

To destroy the integrity of words and to destroy the credibility of users of words is another; neither can be replaced.

It is words that Mr. MacLeish has dedicated himself to preserve. His words, incidentally, could be taken as an attack upon the New Deal just as well as they could be taken as an indictment of the so-called Old Order. In prose, they are beautiful, rhythmical, and one can understand why one so gifted in putting them together should

be stirred by what he considers to be a menace to them. He considers Fascism such a menace. Many of his critics are inclined to believe that it would make no particular difference if Hitler were to suppress his poetry.

Burton Rascoe, who himself enjoys an eminence in the field of literature, probably shares this view. In the *American Mercury* he cited this passage from one of Mr. MacLeish's poems:

The gears turn: twitter: are  
Still now. The sound dies,  
From the East with the Sun's rising  
Daily are fewer whistles:  
Many mornings listening  
One less or two.

Rascoe wanted to know if anybody could understand this.

When Mr. Roosevelt named him as head of the Congressional Library, at Justice Frankfurter's urging in 1939, there was considerable excitement in literary, librarian and political circles. It is a lifetime job at \$10,000 a year and Mr. MacLeish was the first poet ever to hold it. The librarians, through their national organization, complained on the ground that the place should go to a recognized librarian. The Senate was mostly concerned for several weeks,



"Whaddaya mean—'This country can't be invaded successfully'?"



however, over Mr. MacLeish's alleged leftist leanings.

This seemingly amused Mr. Rascoe in his *American Mercury* article no end. He wrote:

There isn't anybody smarter than Archie MacLeish when it comes to knowing how to pick out and fall into a good berth or to jump on bandwagons. What sort of a mind is it that can yell for this Stalin in Carnegie Hall, work on *Fortune*, get its owner's picture and a two page spread signed ad in *Life* endorsing a paste up movie, and all in the name of idealism.

The reference to Stalin probably had to do with a meeting of international writers which Mr. MacLeish once sponsored at which Stalin, to say the least, was not in ill repute.

### Too successful for Communists

THE Communists, however, have been rather critical of Mr. MacLeish, particularly his ability to make money. His preparation of the frescoes for Rockefeller Center particularly enraged them. And he is inclined to dismiss Communism with a contemptuous shrug as not worthy of a thinking man's thoughts. He was active in the movement to help Loyalist Spain.

Mr. MacLeish has never known any of the hard knocks of life. His father was a Scotchman who migrated to Chicago and became a successful merchant. Young MacLeish went off to Hotchkiss School in Connecticut. He graduated at Yale where he played varsity football and captained the polo team. Within a few weeks after this country declared war on Germany in 1917 he enlisted, went to France and served as an artilleryman. He came out of the service as a captain and entered Harvard Law School from which he graduated with honors. He married Miss Ada Hitchcock of Connecticut, and for four years practiced law in Boston and taught at Harvard. Then the poet within him called and, with his wife, he went to France to live in the enjoyable circumstances of an advantageous rate of exchange which appealed to so many restless Americans in the '20's. In these years he was looked upon by his fellow writers as "introspective" and devoted to "private" poetry. He was a disciple of T. S. Eliot and Ezra Pound. He was a rewrite editor of *Fortune* in its earlier years at \$15,000 a year.

When depression hit this country, Mr. MacLeish decided that the poet's function was not to write "introspective" or "private" verse. In *Public Speech* he sounded a call to his fellow poets to deal with the economic forces which were moving about them. He launched a small crusade to establish the importance of poets in current life and most critics are inclined to believe that—instead of being a leftist or a caustic—his greatest aim has been to advance his vocation. When he took over the Congressional Library, it is pointed out, he set out to advance its importance.

The library, he promptly announced, must not be something immovable to which people had to come. Instead, with its boundless knowledge, it should move out among the people. But, although he has obtained increased ap-

propriations for the library, it hasn't moved anywhere. This is just the way MacLeish, the poet, talks. Unless he considers that he is the embodiment of the library. Since assuming charge of it, he has been in increased demand by magazines and the radio; his radio presentations and his magazine contributions all being messages on democracy.

He had had no executive experience when he came to the Library. He promptly set about calling conferences of the 1,000 employees to learn every phase of the institution. As soon as he felt he had the grasp of it, he reorganized the set-up into "three main categories of administration" as he explains it. He established an alcove on Democracy with some 200 volumes. Some Conservative eyebrows were raised when it developed that they included volumes by the Beards, man and wife; Max Lerner, Harold Laski and John Strachey.

He doesn't look, by a long shot, like the popular conception of the poet. Of medium height, 49 years old, he is sturdily built. He has brown hair, a serene, cool dignity.

In his campaign to increase the importance of poets he derided them for what he called their shirking of responsibility in the post-war years. Particularly did he criticize the post-war pacifist or war-is-horrible school of writers, asserting they had taken some-

thing out of up-coming America, had tended to make it soft.

Since MacLeish became head of the Office of Facts and Figures, the magazine *Poetry* has awarded him the annual Levinson prize of \$100 for his work "Discovery of This Time" and for merit in his contribution to American literature.

Justice Frankfurter has described him as the best "journalist in the United States."

Democracy is not, he insists, "a way of owning property, a scheme of doing business—"

For Democracy is never a thing done. Democracy is always something that a nation must be doing.

What is necessary now is one thing and one thing only... that democracy become again democracy in action, not democracy piled up in goods or golds—

If the business man would like something more tangible from a government official, something he could put his teeth in, he can be assured that MacLeish's democracy is not one of billboards, telephones, radios, automobiles or even the "simpering legs" of the magazine ads. Really, his is a democracy of words.

He had three young sons and one married. Of evenings he is happy at home with his attractive wife and fellow intellectuals. In respect to the latter, Washington has become another Paris.

## As Business Sees the Labor Issue

(Continued from page 44)

the closed shop issue is as much opposed to the real interest of labor as it is to the interest of capital and that it is opposed to all the fundamental American principles which have made this country great in years gone by. The closed shop issue, in its finality, will be settled by public opinion and it is the duty of every man engaged in business and industry in the United States to see that the public is honestly and intelligently enlightened in connection with what the closed shop issue means—then let the American people decide it, because, after all, public opinion is the only master in a representative democracy. The closed shop issue is not necessary to keep national labor organizations alive. Perhaps it seems necessary to many of the labor leaders at the moment because they have not won the complete confidence of the working man.

When the labor leaders make the unions good enough and conduct them clearly within the law as the American people understand the law—depriving no man of his individual right to work and treating all with fair regard and fair respect—then the working man will be proud to join and proud to have it known that he is a possessor of a membership in such a union. I know some of my friends among the labor leaders say this is theory and it can't be done. My answer to that is, if it can't be done and they have to do it by the route of coercion, threat and intimidation, plus the denial to thousands of men of their constitutional right to

work—then the union will have to get up a new plan.

As I see it today, if a vote could be taken of all workers in the United States and of all the American people in the form of a secret ballot, with no chance of reprisal or injury to anyone on account of his vote, the closed shop would be overwhelmingly condemned and labor leaders would be asked in a kindly way to devise some other means for keeping their organization together in the interest of labor.

I make the prediction to labor that, if it persists in its closed shop demands and has the power to enforce them upon the American people—such action will be the destruction of management—the final taking over of private enterprise by the State, and the withdrawal from labor unions of all the gains and rights and privileges they have accumulated for themselves in the past 75 years.

This is no time to get mad about the closed shop issue, or any other issue, but it is the time to argue honestly, fairly and fearlessly for what we believe to be right and what we are convinced is the necessary thing for us to do if we would preserve our form of government—the American way of life and the free enterprise system upon which that life rests.

Let capital and labor find a way to bring about a fairer balance in the distribution of the fruits of their common effort, but let them not violate and destroy the fundamental principles upon which their individual and mutual success depends.



## Britain Liquidates Its Tradesmen

(Continued from page 38)

pool or Manchester merchant. But little did these gentlemen, the inheritors of the nineteenth Century Lancashire tradition of rugged individualism, know what was ahead of them. It took only 18 months to eliminate them and erase a business empire that had stood through all of England's many wars for more than 100 years. While the Government allowed trade in American cotton to be nominally free, it clamped down indirect restrictions until private trading became impossible. There was the

difficulty of getting dollar exchange. Then in January, 1940, the price of yarn was fixed. The last blow was the policy of the Government, allegedly for the purpose of conserving dollar exchange and shipping space, of curtailing progressively throughout 1940 the monthly importations of cotton from 100,000 bales in March to 7,500 bales at the end of the year. In pre-war years monthly importations averaged about 125,000 bales.

The Liverpool futures market was thereby ruined. In February, 1941, the

Government announced that it, itself, would become the sole importer and owner of cotton. On March 18, 1941, the Liverpool Cotton Association passed a resolution ending its long trade career of 110 years. Although accepting the Government's decision in regard to importation and ownership of cotton, the members desired

formally to place on record their protest against the decision made, believing that many of the changes which are foreshadowed are unnecessary and against the best interests of the cotton industry generally.

### Trading machinery wrecked

THE functions of most other commodity exchanges have been similarly ended. The appointment of government controllers for such raw materials as copper, lead, tin, aluminum, etc., their importation in bulk by the Government at fixed prices and their rationing to users under license have superseded the free commodity markets in these materials. All the intricate and expert mechanism of peace-time, which dealers had laboriously built up to ensure the smooth supply of these commodities has been swept away in England by the State and the expert personnel of commodity firms are thrown out of a highly technical employment except for a few who advise the inept civil servants in the various government departments, which are now performing the functions of the private trader.

It was only a short step, once the Government gained control of raw materials to gain a stranglehold on the industries using them. The power to issue licenses for the use of raw materials and to ration them left any industry refusing to comply with the Government's requests helpless.

In March, 1941, under the pretext of releasing labor for war work, the Government began ordering certain industries, the chief of which was cotton, to concentrate all manufacturing in plants working full time. The industries were to arrange voluntarily among themselves which were to close and

the Government will facilitate this concentration by granting to groups of undertakings which fulfill the necessary conditions, special help to safeguard their requirements of labor and raw materials but they cannot contemplate the use of public funds to provide compensation . . . where firms are either unwilling or unable to meet the situation by their own efforts, the Government will be prepared in the last resort to impose the reorganization which circumstances require.

The finest invitation to commit hari-kari or else be disposed of by the public hangman ever penned! The cotton industry tried to meet the Government's demands for the release of labor by suggestions for a spread over among all plants working part time. It was to no avail. By the beginning of August, 534 factories had closed down, 132 of them textile mills. There is no compensation for the owners, nor any guarantee of a resumption of business when the war is over.

The number of workers released is

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# BURGESS SNUBBERS



inconsequential compared with the dislocation caused to the industries affected. It would have been possible to obtain any workers required specifically for war purposes without all the dislocation that schemes of concentration involved, had the Government been as courageous in applying to labor the powers it had under the Emergency Defense Act as it was in applying them to business. The Act of May, 1940, gave the Minister of Labor

power to direct any person to perform any service required of him... the Minister will be able to prescribe terms of remuneration, the hours of labor and the conditions of service.

The powers to conscript labor have never been exercised, but the power to blitz private enterprise has been used aplenty.

Business run by bureaucrats

NOT only has the Government assumed the power of life and death over any business whose existence it does not deem essential to the war effort, but it takes the right to interfere in the management of any business it graciously allows to operate. By regulation 78 of the Defense Act, if a government controller is not satisfied with the way a business is running, the Government is allowed to dismiss any director or manager obstructing a controller.

In case the stockholders try to make trouble, the act enables the Government to buy up the shares of the company—not at a price arrived at by arbitration but at one fixed by an accountant appointed by a government functionary, the Lord Chief Justice.

Plans are now under way to enable the state to have a very large say in real estate matters. London and 15 other cities have entered into a national government town agreement, so that no owner of property can rebuild any building without meeting the conditions of a long term planning scheme. It is not a question of meeting building regulations but of fitting oneself into some future—and at present nebulous—regulated plan. The Government Committee, at present sitting on the outlines of this national planning, has made public two of its recommendations:

any land sold shall not be paid for at a higher price than its value in March, 1939 (although general prices are already nearly 50 per cent higher than on that date) and in future all rights to any undeveloped land shall be acquired on behalf of the State.

Banks become Treasury agents

IT IS not only in trade and industry that serious blows have been dealt at private enterprise. The activities of banks are so circumscribed that, in the words of one financial authority, bankers have virtually become civil servants. Commercial banking has ceased to exist and banks are nothing more than the agents of the Treasury. There is practically no private lending as Treasury restrictions are so severe that loans for

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personal purposes are almost impossible.

A borrower's soundness of character or the strength of his collateral is no longer the deciding factor in a loan by a private bank. Loans are governed by national requirements as interpreted by the Treasury, so that the only persons who can get loans are government contractors or subcontractors. About the only vestige left to banks from the days of free enterprise is the privilege of making profits—up to the excess profit limit—and of having their shares privately owned.

The attacks on the little man have been persistent. Small multiple businesses, to the bureaucrats of Whitehall, are a plain nuisance in England these days. As in the case of attacks on the larger forms of free enterprise, the Government has generally used indirect methods in its assaults on the little man—the issuing of licenses for the sale of various commodities—which can be capriciously withheld—or the setting up of cumbersome regulations for their disposal.

The Ministry of Food fought one losing battle against the little man early in the summer. The President of the Board of Trade had already forced consumers to buy certain foodstuffs such as butter and lard from the same storekeeper. The Minister of Food then ordered that certain rationed foodstuffs, which the Government controlled, should be issued to no storekeeper having less than 25 customers.

It was claimed that this would shorten delivery routes. What happened to the poor small storekeeper who had carefully built up his good will through many hard peace years was no concern of the bureaucratic theorist in Whitehall. England being still, fortunately, a democracy, the protesting storekeepers were not purged. Their outraged cries forced the Minister to beat a half-hearted retreat. They will continue to receive their rationed supplies of foodstuffs in spite of having fewer than 25 customers, if local authorities rule they should.

The Government on the one hand preaches dispersion as a protection against the air menace, and on the other practices, where private enterprise is concerned, methods of concentration that would delight the most monopolistic.

### Business becoming socialized

ALL these limitations on the field of free enterprise are a continuation of a trend that was in evidence before the war. England is actually putting into practice theories of certain economists of leftist tendencies.

A good measure of what has been

done domestically fits in with the views which Ernest Bevin expressed at the Transport and General Workers Conference August 18 when he gave his interpretation of The Atlantic Charter.

In his speech he said:

Industry cannot go back after the war to methods employed before it. If I had my way I would introduce for the raw materials of the world something in the nature of a postage stamp. I would pool them internationally, pool the freights and make a charge for their use with international control. . . . I hope the declaration (i.e. Roosevelt-Churchill) means not only free access to raw materials but the working out of a system whereby these great basic materials will be free to mankind on equal terms. Gold can no longer give international stability. (Manchester Guardian August 19, 1941)

Since this summer all forms of transportation in England are completely under government control and completely pooled, a fixed charge (just like a postage stamp) being paid for their use irrespective of what profits are made. This applies to railroads, canals, shipping or dock services. The facilities for the wholesale buying of most commodities have been pooled and are operated by the Government. Generally their cost to the consumer is fixed inflexibly for a considerable period ahead. Many industries have been forced to pool their manufacturing activities, though in general they are still being operated privately. Exporting is similarly becoming a pool activity directly under government supervision, and the appointment of a direct representative of the Board of Trade this summer to supervise British exports in the United States was a revolutionary innovation and superseded in many directions the individualistic efforts of resident representatives of British firms who had been here for many years.

What will happen to private trade and industry after the war is anybody's guess. It is certain that many provinces invaded by the State will never be returned to private enterprise. Whether business in England can, after the war, be half under state control and half free one cannot tell. There may be a swing back from eternal planning to a freer play of natural forces in trade and industry. It is doubtful.

One thing is certain, had business men taken more heed of what was happening, as did the Liverpool and other Chambers of Commerce a little too late this summer, limits might have been set to the encroachments of the State which would not have altered the nature of the business structure in England to the extent that it has. The business men of England have been super-patriotic or, more probably, asleep.

The price of liberty is eternal vigilance!

## Food Prices Climb

THE PRICES OF FOOD are "gradually climbing back to a normal level in proportion to the rest of our national economy," says Paul S. Willis, president of Associated Grocery Manufacturers of America, in a statement intended to refute irresponsible charges of food price inflation.

Prices are up from the depression low but have barely equaled the high point of the '30's, attained in November, 1937. The AGMA president declared the food industry is "in the middle of a gigantic squeeze play between subsidized farm prices and retail price ceiling."





Down the broad O-hi-o with  
190 automobiles for cargo

## Autos Float— 190 At a Clip

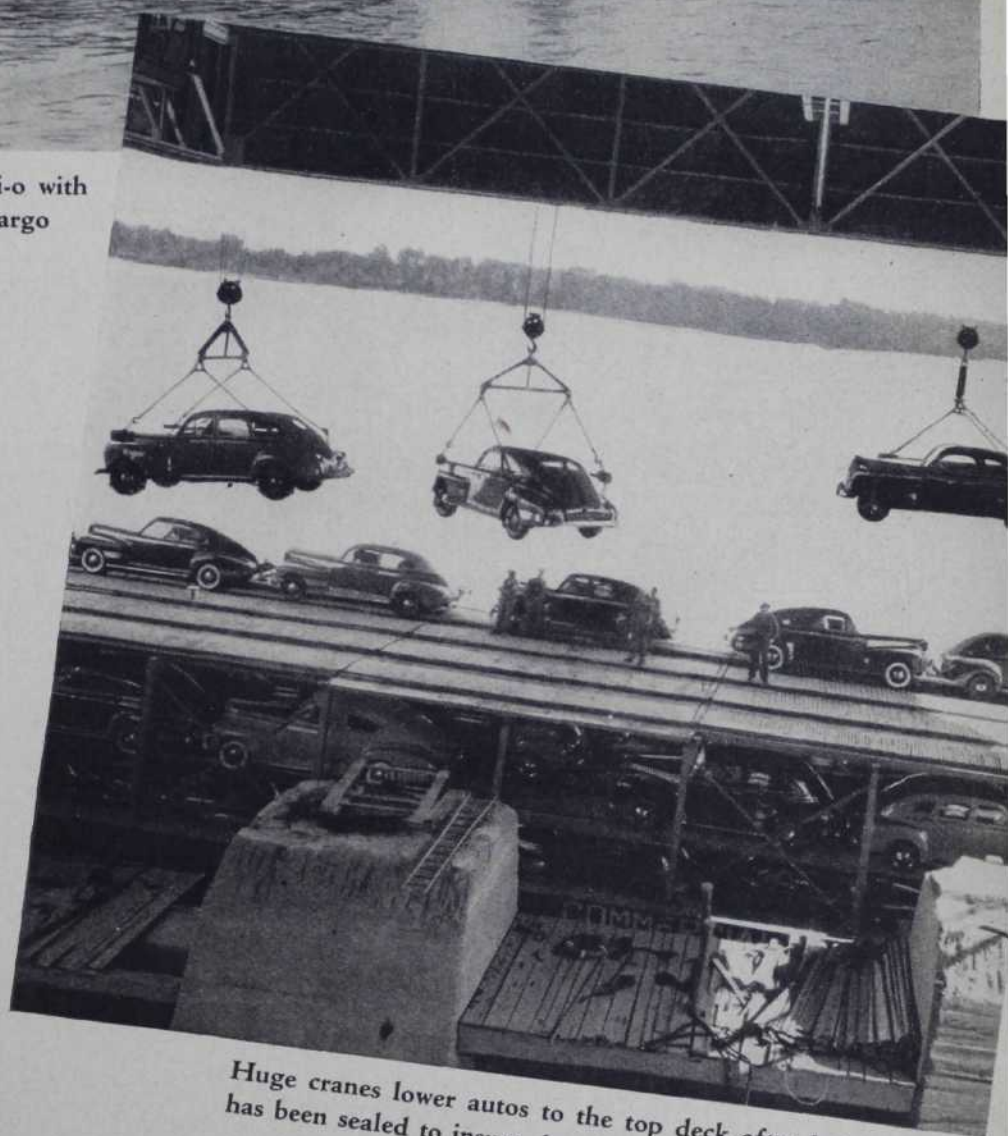
**W**ITH 190 AUTOMOBILES aboard, the barge pictured above is one of eight that has started a new phase in automobile transportation between the North and South.

It is outbound from Evansville, Ind., on the Ohio river for Guntersville, Ala., farthest point south on the Tennessee river. Owned and operated by the Commercial Barge Lines of Evansville, it is the culmination of a new business pioneered six years ago with a single barge carrying only a few cars.

Starting with service from Evansville to Memphis and New Orleans, the auto carrying business has branched out to operate from Cincinnati, Louisville and Evansville to Memphis, Vicksburg, Baton Rouge, New Orleans, Port Arthur, Beaumont, Houston and up the Tennessee river as far as Guntersville. At the latter point, the company has built a modern terminal where rail and truck lines redistribute the freight to Atlanta, Birmingham and other Southern centers. Service is eventually expected to go up the Tennessee as far as Knoxville and through the Intra-Coastal Canal to Corpus Christi, Texas.

The company was organized in 1935 when executives of the Mead Johnson Terminal Corporation and the Motor-Car Transport and Commercial Carriers, Inc., pooled their resources and ingenuity to build a barge capable of carrying a large number of automobiles.

First they proved it was possible to carry the normal load for a river barge and still carry automobiles on the top deck. Their years of experience in auto transportation by truck aided them in perfecting a new barge with added decks



Huge cranes lower autos to the top deck after hold has been sealed to insure dry shipment

for cars. On a standard hopper barge, 175x26x11 feet, capable of handling only 24 automobiles, a superstructure consisting of two extra decks or runways was built. This addition enabled the barge to handle 82 automobiles.

The new water carrier continued to expand, always upward. The last refinement was adding outriggers or "wings" to the outside of the barge hull, making space for 60 additional cars and increasing total carrying capacity to 190 automobiles. With the first or lower deck sealed, the entire hold of the barge is available for freight of all types, thus making possible the handling of a pay load in either direction.

J. D. Beeler, operating manager of the

company, in pointing out the significance of this water carrier system says:

"It has proved that automobiles can be moved safely and promptly by water at a substantial saving for dealers. But even more important is the service that it offers on freight generally between points in the Middle West and the Southeast. The inauguration of service by Commercial Barge Lines does not create a panacea, but it does offer substantial savings in freight costs between the Southeast and the territory situated west of an imaginary line drawn between Buffalo and Pittsburgh. . . .

"It will help Evansville become one of the most important distributing centers of the Middle West."



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WOODSTOCK  
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## State "Ads" Win Folks, Factories

STATE advertising and promotion campaigns are yielding a bumper crop of industries and tourists. Reason is double-barrelled—the war and the fact that most states began to lay the groundwork several years ago.

Foreign wars have forced American sightseers to travel at home. National defense has stimulated industrial expansion and relocation, while industrial rejuvenation and resultant gain in consumer purchasing power have increased demands for "home grown" agricultural and industrial products.

These developments have served as a tonic to states which have spent millions of dollars in the past seven or eight years in advertising tourist attractions, and searching out and cultivating new markets for "local" products. Concurrently, they have been making tax and other concessions in efforts to win new industries.

### Followed industrial patterns

MOST of the promotional campaigns were modeled on patterns originated by private enterprise. Results were just becoming apparent in many states when the war's influence began to be felt. Because of their previously developed promotion programs, the states now are in a position to profit greatly and, at the same time, cooperate fully in the defense effort, especially in the industrial location field.

A survey published by the Council of State Governments shows 39 states appropriated nearly \$6,000,000 for state advertising in 1941, a substantial increase over the \$4,400,000 spent in 1940, despite the fact that one state, Nevada, withdrew from the field through failure to appropriate funds. Georgia, however, soon may enter the field. A constitutional amendment approved in June made state advertising legal.

Funds available to the 39 states for this year's campaigns range from \$825,000 in Florida and \$600,000 in Utah to \$20,000 in Montana and \$15,000 in Ohio. Although 26 states obtain money from the general fund for advertising only, eight earmark specific taxes, usually on products advertised. The other five states get money from both sources.

Of the states earmarking specific tax revenues for advertising, Florida raises \$750,000 of its budget through an excise tax on citrus fruits, remainder from general inspection fund. The \$109,000 spent for advertising Idaho potatoes and onions is raised by an excise tax on the products. An excise tax on butterfat sustained the \$94,000 budget of the Iowa Dairy Industry Commission. Of \$478,000 spent by Washington this year, \$250,000 came from a tax on apples, \$61,996 from a tax on butterfat, the rest from state's general fund.

Special publicity bureaus independent of state departments direct promotion campaigns in most of the 39 states. Examples are the Division of State Publicity set up by Indiana in 1939, Missis-

issippi's State Advertising Commission and Arkansas' Agricultural and Industrial Commission. In the other states, promotional activities are directed through existing departments. The conservation department is the advertising agency for Kentucky, the highway department for Oregon.

Several states advertise common products through cooperative campaigns. Arkansas, Louisiana and Texas have a tri-state agreement to stimulate sale of rice. Campaign, which went into effect August 1, will be financed by a special processing tax of two cents a 100 pounds on all rice milled in the three states. Georgia, North Carolina and South Carolina conduct a joint campaign advertising peaches produced in the three states. Several states, also, advertise on a regional basis, with the six New England states working through the New England Council, and 11 southern states working through the Southern Governors' Conference.

Of the states which do not appropriate money for advertising, all but Delaware, which has no state advertising of any kind, are promoted amply by their municipalities, civic and service groups, and by private agencies and organizations of producers within the states. These states are California, Georgia (until funds are made available), Missouri, Nevada (with Reno conducting broad campaigns), North Dakota, Oklahoma, South Carolina and Texas. Private groups are expected to spend approximately \$1,000,000 this year advertising California peaches, pears, prunes, wines and olives.

North Dakota is served by the Greater North Dakota Association, a private agency with a budget of \$50,000 a year obtained from memberships and contributions.

Texas is publicized by its municipalities, with San Antonio alone reported spending \$100,000 annually to get tourists, residents, industries, farmers and investors. South Carolina and Georgia, also, participate in joint efforts of the southern states conducting campaigns on a regional basis.

### Many media for advertising

A LARGE percentage of the total \$6,000,000 appropriated for state advertising in 1941 is spent for magazine, newspaper and direct-mail promotion, with most of the states using all three. In addition, motion pictures are used by 16 states, radio by 14, poster panels and posters by four.

Thirty-five states compete for the tourist trade, with 32 states seeking new industries and 23 trying to find and develop new markets for their products. Eleven states are seeking new residents, four more than last year.

A different promotional technique, involving tax concessions and exemptions, or free plant facilities and bonuses, is used by many of the 32 states competing actively for new industries. While the

when the  
**NATION'S BUSINESSMEN**  
go to Washington  
RATES FROM \$5  
THE **Carlton**  
16TH at K STREET • WASHINGTON, D.C.



industrial expansion traceable to the defense effort located industries in some states regardless of concessions, the technique has produced results.

The tax concession, apparently, is the most popular industrial encouragement, with municipalities empowered to make the concessions in most of the 18 states where this method is used. In Kentucky, for example, a city council may exempt new industries from local property taxation for five years; in Oklahoma, citizens may vote to extend exemptions. Louisiana's Department of Commerce and Industry may offer tax concessions, and cities may vote bonds to erect and maintain industrial plants processing farm products.

In Vermont, local taxes may be waived for ten years upon approval of the voters. Other states granting tax exemptions include Alabama, Arkansas, Florida, Maryland, Massachusetts, Michigan, Rhode Island, Virginia and Wyoming. Plant facilities may be offered in Rhode Island and Tennessee and in Michigan where, in addition, cash bonuses have been given by cities.

Because many states seeking new industries have for several years kept up-to-date files on industrial facilities, including vacant plants, and equipment, and idle or employed manpower, they were able to give immediate and valuable assistance to the national defense program.

## Hobbies for Hire

IN ANY business a 1,000 per cent return on an investment is something to brag about. It is even more remarkable when a church realizes that much on an investment.

It happened out in Rockville Center, Long Island. When the St. Mark's Methodist Church burned, that meant a new building. Money had to be raised and the young clergyman, the Reverend Karl F. Moore, didn't want his men members burdened with large pledges. Nor did he want his women members giving endless bridge benefits and church suppers.

Cudgeling his brains for a way to avoid all this, he gleaned a brand new money raising idea from the twenty-fifth chapter according to St. Matthew.

Do you recall that parable about the man who had three servants? To the first he gave five talents, to the second, three, and to the third servant, only one talent. A talent, incidentally, was an ancient monetary unit. The servants were to go forth, multiply these pieces of silver and return the increase to their master. The first two servants returned to the master double his money but the third, having buried his talent, was able to return only that one.

So, like the master in the parable, the deacons of St. Marks distributed crisp new dollar bills to members of the congregation; 350 of them. When the day of reckoning rolled round three months later \$3,026 was returned for the building fund.

How did they do it? Well, these suburban Methodist business men rode their hobbies and had a lot of fun. The clergyman, for instance, is an ardent follower of Isaak Walton. He invested his dollar in the makings for trout flies. He was always behind with his orders though he spent all his spare time making lures and though he enjoined his customers not to use them for Sunday fishing!

Sports fans got busy and gave lessons for nominal sums in golf, tennis, badminton, ping-pong. Bridge sharks gave instruction and chess tutors were available. Amateur photographers enlarged their best shots, framed them attractively and offered them for sale.

several apple trees in their yard used to tell the neighbors to come over and help themselves. Not today. The neighbors buy those apples—all for the cause of the building fund.

An advertising executive offered his services as a ghost writer. He also wrote sales letters for a fee. An accountant announced that he was available for any sort of clerical work.

Some of the men without hobbies and who couldn't turn their talent into a dollar had to be ingenious. One man hired himself as an electrician at a dollar an hour to set up his son's electric trains. In his letter accompanying the check he admitted that he had never worked so hard nor had so much fun. Another was called for jury duty so he tossed his \$3 each day into the building kitty.

An ex-clergyman could do nothing better than mix his own French salad dressing. He used garlic as a seasoning with a rather heavy hand and aptly labeled this pungent concoction "Flesh-pots of Egypt."

The Congregationalists of Rockville Center have eaten so many talent pies and subscribed to so many of the talent services offered by the Methodists that they have adopted the talent plan. In fact, letters have poured in from every state, Canada and South America asking the St. Mark's Methodists for details.

This hobby-for-hire idea is spreading like wildfire and wherever it is tried money raising becomes a pleasure rather than a bore.

Horticulturists sold prize dahlia bulbs and chrysanthemum roots. Cut flowers, too, were for sale.

A salesman invested his dollar in a book on public speaking and was soon giving lessons at 25 cents a session.

An insurance broker hammered out ashtrays and bowls, having spent his dollar for sheets of pewter and brass.

A business man with a large and up-to-date library began renting his books at three cents a day instead of lending them to his friends. One family with

Can You Afford  
To Ignore A  
20% SAVING in  
FILING COSTS?

PENDAFLEX\*

the new system with the hanging  
folders cuts Filing Time 20%

Pendaflex — a simple invention — but it revolutionized the job of filing and finding papers! Pendaflex actually reduces SEVEN filing motions to THREE! Saves space, too — makes 4 drawers do the work of 5, under ordinary conditions. Install Pendaflex and say goodbye to sagging, slumping, dog-eared folders. No more pushing and digging to find the folder you want. Selection is VISUAL not MANUAL. No matter how full the file, Pendaflex folder tabs are always level—in plain view. Simple. Inexpensive. No new files to buy. Makes files look like "a million"—but no luxury. Pendaflex pays for itself in the time it saves. See Pendaflex at your Office Supply Dealer. Write today for Pendaflex leaflet.

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*Oxford*  
**PENDAFLEX\***

\*Reg. U. S. Pat. Office

WHAT AN IMPROVEMENT! AND  
LOOK AT THE TIME  
THIS SAVES ME





"We can talk *privately* to our key-men on the most confidential matters with no chance for anyone to eaves-drop or interrupt."

## DICTOGRAPH

EXECUTIVE INTERIOR TELEPHONE SYSTEMS

combine Privacy, Priority and Speed for the top executives in 10,000 American offices and factories, completely independent of traffic over the outside telephone system. To "Speed up Speed," ask for literature—or better still a demonstration on your desk.

DICTOGRAPH SALES CORP.

580 Fifth Avenue Dept. 553  
New York City



## How to Increase Production for 1c a week per worker



Top speed production is the order of the day. Step up the efficiency of your workers' hands with Formula SBS-II the safe, industrial skin cleanser, and you automatically step up Formula SBS-II productivity. Formula SBS-II quickly, easily, and safely removes grease and grime; helps prevent dermatitis and skin infection.

**FREE TRIAL:** Test Formula SBS-II in your plant at our expense. Write today for free trial supply to Sugar Beet Products Co., 312 Waller St., Saginaw, Michigan.

**Formula SBS-II**  
THE WASHWORD OF INDUSTRY

## The Tangled Web of Priorities

(Continued from page 42)

who are buyers know that an A-10 is almost nothing and a B-1 is strictly nothing. . . . We have within our plant, and paid for, an inventory of approximately 80 per cent of our requirements for the fiscal year. We are battling every day and every night to get the remaining 20 per cent. Our problem resolves itself into this—shall we go down by way of exorbitant prices, or shall we stay within the government regulations and die on third base?

Farm production has been described as the fourth leg of the defense stool—on a par with guns, tanks and planes. But on the official priority schedule it is the tenth leg, or the eleventh.

Although the priorities muddle is reflected most acutely in the normal lines of civilian production, it often pinches urgent defense business as well. One case before Congress relates the experience of an Ohio manufacturer of blasting equipment:

We provide blast-hole machinery to the Army and the Navy, to the steel mills for taking up fluxing stone, to the iron mines for blasting out iron, to cement mills for raw materials, to coal producers for stripping coal.

We got an A-1 rating recently for some machines for the Navy. We had machines on hand and furnished them within a few hours; but we cannot now replace them until we get another A-1 certificate, send out and get the raw materials, bring them into the factory, and then take eight or nine weeks to put the machinery together.

Three weeks after this protest, in October, the manufacturer still was without his new certificate, because he had no defense order in hand as the basis for a new priority application.

### Priorities are stopping work

BUILDING priorities on private dwellings have spread unemployment in many cities.

"If the defense housing program continues as it is," reported the spokesman of the Toledo Building Trades Council, "about half the building tradesmen in Toledo are going to be idle. We have expressed ourselves as backing the Government 100 per cent on the national defense program, but we ask and beg you to do everything in your power to get the set-up on defense housing changed."

And from the President of a State Building Trades Council, A.F.L.:

Today they are fighting over in Europe to get rid of possibly some of the things that we will have here if we aren't just a little bit careful—such as denying a fellow the right to earn a living at a trade or job he prefers. You cannot take a bricklayer who has worked 40 years at his trade and put him in the shops at making machine tools or assembling motors. It is just an utter impossibility.

The Latin-American markets of the United States also have suffered from our domestic priorities rulings. One case before Congress from Cleveland tells of a large refinery project near Rio de

Janeiro under construction by a U. S. firm. For the 9,000 tons of steel and rails needed, the contractor had to place his order in Birmingham, England.

"He is getting them delivered from Birmingham."

A Cincinnati manufacturer of metal advertising novelties who said he faced a shutdown exhibited a June issue of the London *Export Gazette*. Advertisements in this trade paper offered for export in the metal line "wires, sheets, black plate, tin plate, threshing machines, zinc plate, craftsmen's tools, engineers' tools . . . rubber, paper, insulated cable, joint boxes, electric meters, electric condensers." The American manufacturer read the advertisements, concluding:

Our company, for one, has sent an order to England for five cars of steel on the strength of these advertisements.

### Death blow to small men

AN IMMEDIATE impact of priority trouble is upon the sales organization. Managers who must spend a week or ten days out of every month in Washington wrestling for essential metals and chemicals to keep afloat have scant need for salesmen. One sales manager told Congress:

Since September, I have been in Canada twice, on the east and west sides. I have been in the states from Jersey to Washington, and I find the same complaint everywhere—that small business men are being forced out of business by priorities.

. . . Now there is something seriously amiss, and I am frank to confess to you that the small business men of the country are beginning to think that there is a deliberate attempt to put them out of business. . . . I can't believe that such a thing is going on, but I would like to have you look at the picture for a minute. . . . There are 1,500 more small factories in Canada today than when the war started. There is no unemployment problem in Canada; there is no priority trouble in Canada, there is no conscription in Canada—and Canada is at war!

But across the river the situation is different. Detroit and Michigan have had a large proportion of the defense contracts. The defense industries are in a roaring boom. Yet we find Governor Murray D. Van Wagoner of Michigan testifying before a House investigating Committee on September 23:

I am not an alarmist. I know that national defense deserves the right of way. . . . But I know also that unless civilian labor priorities and civilian material priorities are granted quickly to those areas which cannot participate in the national defense business, Michigan and the nation will see economic chaos within three months.

He pointed out that in Flint, where automobile production has been cut approximately in half, there were 45,000 industrial workers, "and only 2,000 on defense contracts."

A week later, September 30, William Green, President of the A. F. of L., said in a national broadcast:

Small business firms employ, in the ag-



gregate, more persons than do the large corporations. They are the backbone of smaller communities. A large number of machine tools, important factory spaces and millions of toilers face long idleness unless the policy of spreading defense production is made to work effectively.

Three days later, October 3, Philip Murray, President of the C.I.O., called for a national effort to "mitigate the vicious effects of the industrial confusion as much as possible." He added:

While on one hand these dislocations mean the unemployment of workers, on the other they mean failure to get the maximum national output.

### Bureaucracy outgrows work

THE course of true defense never runs smoothly. Since June, 1940, our military expenditures have multiplied by 32, advancing from about \$50,000,000 monthly to \$1,600,000,000 for October this year. Yet our industries have met every demand upon them by government. There has been no failure of American enterprise.

Meanwhile, in Washington, the defense bureaucracies have sprouted and flowered prodigiously. In 15 months, more than 600,000 persons have been added to the civil payrolls of the federal establishment—exclusive, of course, of all expansion in the military ranks. During the past three months this rank growth of bureaucracy has been accelerated, averaging 1,700 new payrollers every day! This is a far greater increase than has been recorded during these same three months in all our military personnel combined.

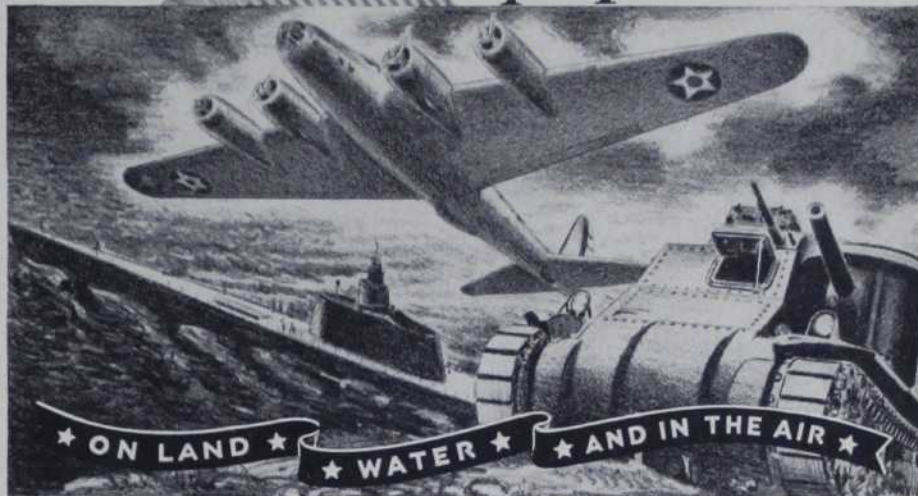
Dominant amid all this emergency expansion of the federal civil personnel is a pronounced tendency toward socialistic controls—a freely uttered conviction that all business should operate under government license, certificate, or permit; that every ounce of copper, aluminum, nickel, and zinc should be doled out on application, much as dangerous drugs are dispensed only on a physician's prescription.

This new and aggressive collectivism finds expression in the official attitude that business not only must be regulated against abuse of power, but that, in the routine processes of production and distribution, Government must cross every "t" and dot every "i"—even to detailed specifications for automobile trim.

This attempt to manage everything from Washington leads to ever more complex systems of audit and control, often by inexperienced or incompetent subordinates, until we witness at length the spectacle of an American business man trying in desperation to buy steel in England, or the S.P.A.B. doling out priority chits for more copper than it can supply.

In detail, there are several approaches to the priorities muddle, most of them obvious to every man of business experience. The significant fact is that all proposals for reform turn upon methods and attitudes in administration. Here is America's great defense bottleneck—an inner circle of socialistically-inclined bureaucrats trying to sneak the yoke of collectivism upon the strong neck of free enterprise.

## ★ ★ ★ Morse puts Teeth into Defense Equipment ★



**I**N DEFENSE EQUIPMENT—where the ultimate in power transmission is necessary—you'll find Morse Chain Drives on the job.

In defense factories, too, Morse Drives are at work, transmitting power efficiently and dependably. "Teeth, Not Tension"—no slippage—no power waste. Investigate what Morse Chains can do for you—consult the Morse man in your territory.

SILENT CHAINS

ROLLER CHAINS

FLEXIBLE COUPLINGS

CLUTCHES

# MORSE *positive* DRIVES

MORSE

CHAIN

COMPANY

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DIVISION

BORG-WARNER CORP.

## ★ ★ ★ ★ ★ *All Space is Paid Space*

WE PAY FOR the articles and editorials which report and interpret what goes on in the business world.

Advertisers pay for the advertisements which give you specific information about products and methods that will help you keep pace with the fast-moving parade and enable you to conduct your business profitably.

You pay your part by subscribing to the combined efforts of the editors and the advertisers.

You get a full return on your investment by reading the articles and editorials. But don't stop there. Look to the advertising pages for your extra dividend.

Turn back now to the beginning, and go over the advertisements one by one. They are full of profit-making ideas.

# NATION'S BUSINESS

going to 359,171 men—the largest group of business buyers in America

★ ★ ★ ★ ★





## Something like a star...

OLD AS MAN is the admonition, "Hitch your wagon to a star"; young as a child is the impulse "To wish upon a star." For all men, in all time, a star has been the bright kindling point for dreams, fixed moment in time and eternity, beacon in the night and promise of the day to come.

Something like a star is research, because it answers in the world of practical affairs to some eternal spirit in the heart of man—a perpetual restlessness with things as they are, an eternal seeking for a better way, a continual progress towards a better world. And because this thing lives more in the mind and the spirit than in the world itself, it is perpetual, everlasting, immutable, as eter-

nal in its way as the stars themselves.

More than 60 years ago the General Electric Company first "hitched its wagon" to the bright star of research. In all this time the star has not been extinguished, instead it has gradually grown to be the guiding star of all American industry. Even today, when so large a part of the total resources of General Electric are employed in the task of making America's defenses strong, it still shines bright.

But General Electric is not "wishing upon a star." Throughout the Company, scientists, engineers, executives, are thinking and planning and working to the end that the tomorrow which stars promise shall not simply come—but that it shall be better than today.

*American industry has accepted the responsibility of serving America; is accepting the responsibility of helping to defend America; will accept, tomorrow, the responsibility of helping to build a better America and a better world.*

# GENERAL ELECTRIC

952-242M6-211

## Index of ADVERTISERS

December • 1941

	Page
Addressograph-Multigraph Corporation	45
Aetna Fire Group	3
Allen Calculators, Inc.	81
Aluminum Company of America	3rd Cover
American Credit Indemnity Company of New York	75
American Telephone & Telegraph Company	53
Association of American Railroads	10
Autopoint Company	84
Bakelite Corporation	4th Cover
Bendix Aviation Corporation	61
Burgess Battery Company	80
Burroughs Adding Machine Company	39
Butler Manufacturing Company	74
Carlton Hotel	84
Coca-Cola Company	90
Cutler-Hammer, Inc.	63
Diagraph-Bradley Stencil Machine Corp.	82
Dictograph Sales Corporation	86
Do/More Chair Company, Inc.	81
Ediphone, The Thomas A. Edison, Inc.	12
Fairbanks, Morse & Company	2
Felt & Tarrant Mfg. Company	43
Fleur-O-Lier Manufacturers	69
Frankfort Distilleries, Inc.	71
Fridén Calculating Machine Company	73
Fruehauf Trailer Company	16
General Electric Company	88
General Motors Corporation	46-47
Goodyear Tire & Rubber Company	14
Guth Company, Edwin F.	72
Hartford Steam Boiler Insp. & Ins. Company	9
Household Finance Corporation	11
International Business Machines Corporation	77
International Salt Company	4
John Hancock Mutual Life Insurance Company	89
Johnson & Higgins	1
Kimberly-Clark Corporation	49-57-58
Marchant Calculating Machine Company	68
Metropolitan Life Insurance Company	41
Morse Chain Company	87
Norfolk and Western Railway Company	7
Oxford Filing Supply Co.	85
Pleasant Valley Wine Company, The	82
Postage Meter Company, The	13
Prudential Insurance Company	73
Pullman-Standard Car Mfg. Company	2nd Cover
Standard Accident Insurance Co.	8
Sugar Beet Products Company	86
West Virginia Publicity Commission	78
Woodstock Typewriter Company	84
York Ice Machinery Corporation	6





## FROM ALL ANGLES

John Hancock group insurance service includes not only life insurance but also accident and sickness benefits, hospitalization coverage, group annuities, group creditors' coverage and other forms.

For complete information on John Hancock Group Plans, call our local representative or write to our Home Office at 197 Clarendon Street, Boston, Massachusetts.





# The recess bell is a great teacher



**"R**ecess" teaches us all a valuable lesson. Ask youth if it likes "recess" at school. Of course, it does. "Recess" is an intermission... a pause in learning,—with play and sports to make it pleasant. It teaches us of everybody's need for an occasional pause. There's a simple, easy way for any busy person to have a needed moment's recess,—it is the pause that refreshes with ice-cold Coca-Cola.

**I**T'S a work-world of busy people, this. Even our idle minutes must be made to do their bit. Small wonder then that much of our recreation lies in little things we do every day to break the tension and routine. One of them is a pause now and then—Nature's way of alternating the current of human energy.

Millions have found that *the pause that refreshes* with ice-cold Coca-Cola is a natural answer to this natural impulse to pause. Simply because *the pause that refreshes* with ice-cold Coca-Cola does something pleasant that people need... it provides a *refreshing* pause.

With present-day life geared at such a pitch, it would seem to indicate that if there were no such thing as *the pause that refreshes* with ice-cold Coca-Cola, it would be necessary to invent one. People in business and industry have learned of its importance in adding to a moment of relaxation what relaxation always needs... the pure, wholesome refreshment of ice-cold Coca-Cola.



**THE AUTOMATIC FOUNTAIN DISPENSER FOR COCA-COLA**

At soda fountains everywhere, these big red automatic dispensers for Coca-Cola insure uniformity of the fountain drink. First, the right amount of finely chipped ice is placed in the standard glass for Coca-Cola. Then, the dispenser delivers an automatically and properly mixed Coca-Cola.

**Enjoy The Pause that Refreshes with ice-cold Coca-Cola**

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"It's the 3:37 East Bound"

## *Your sons and daughters* will be the pilots of Aluminized America

The small boys who used to sing out the names of brass-studded automobiles now have sons who will fly as naturally as Dad and Mother drive the family car.

Aviation is truly coming of age, thanks to the courage and ability of far-seeing aircraft executives who nurtured the industry from hand-made planes to assembly line production.

It does not mean much to say that there soon will be 400,000 aviation workers compared with 50,000 in 1939 . . . unless you know how hard it is to train even one pair of strange hands in tasks as delicate and tolerances as small as in airplane building.

Alcoa knows, for Aviation and Alcoa have grown up together. Faster, safer, larger planes require stronger, lighter, Alcoa alloys. The airplanes of today are evidence of the success of their mutual efforts.

It does not mean much to say that Alcoa has more than doubled its production in two short years unless

### Material<sup>™</sup> for Future Miracles

While producing aluminum for Defense in quantities undreamed of a few years ago, Alcoa constantly is learning new ways by which these economic advantages of Alcoa Aluminum will serve Aluminized America:

- Light Weight
- High Resistance to Corrosion
- High Electrical Conductivity
- High Conductivity for Heat
- High Reflectivity for Light and Radiant Heat
- Workability
- Non-Magnetic Properties
- Non-Toxic Properties
- Strength (in alloys)
- Non-Sparking Properties
- Appearance
- High Scrap and Re-use Value



you know that next year one new Alcoa mill alone will be rolling out, *in one month*, more airplane sheet than has been consumed in all the commercial and private planes *ever built in this country*.

Back in 1939, before Hitler marched into Bohemia, before German armies sacked Poland; back in 1940, before Norway, Denmark and France were overrun, when priorities were unheard of, Alcoa was voluntarily piling up inventories, investing \$200,000,000 of its own money. Without such activity, many of today's planes would be impossible.

All these things Aviation and Alcoa did in times of peace have made them a great force for Defense; the things they are doing now in Defense will enable your sons and daughters to become the pilots of Aluminized America.

**ALUMINUM COMPANY OF AMERICA**  
2125 GULF BUILDING • PITTSBURGH, PENNSYLVANIA



# Electric Motor Switches and Aircraft Firing Keys

*....what have they in common?*



BAKELITE Molding Phenolics, which have long been used in the manufacture of industrial motor switches, now provide the same performance advantages for aircraft firing keys:—

Superior electrical insulation

Mechanical strength

Resistance to heat, cold,  
and moisture

Dimensional stability



**I**N MILITARY AIRCRAFT, a single key mounted in the pilot's control stick actuates the simultaneous firing of a battery of machine guns. Because this firing key is frequently the determining factor between safety and disaster in combat, it must be made of materials that meet the severest specifications.

The key frame must possess superior dielectric properties, to safeguard permanently the integral metal parts against short circuits. It must be dimensionally stable, to prevent the key operating mechanism from jamming or loosening when exposed to extreme heat, cold, and moisture. It must be tough enough to withstand terrific plane vibrations and the constant impact of

powerful, spring-operated electrical contacts.

In seeking such a material, the defense authorities found it already at hand . . . a BAKELITE Phenolic Molding Plastic. For many years, it had provided for electrical motor switches the identical performance characteristics now essential to aircraft firing keys. Furthermore, the same economical and rapid method of compression-molding the motor switch parts was readily adaptable to fabricating the firing key frames.

Perhaps you, too, may find an immediate solution to your design and production problems with one of the

numerous materials obtainable from Bakelite Plastics Headquarters. These materials are described and illustrated in Booklet 25P, "New Paths to Profits." Write for a copy today.

BAKELITE CORPORATION  
Unit of Union Carbide and Carbon Corporation



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